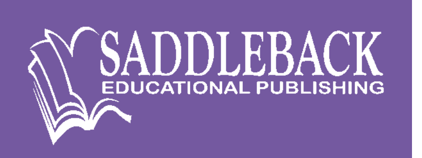
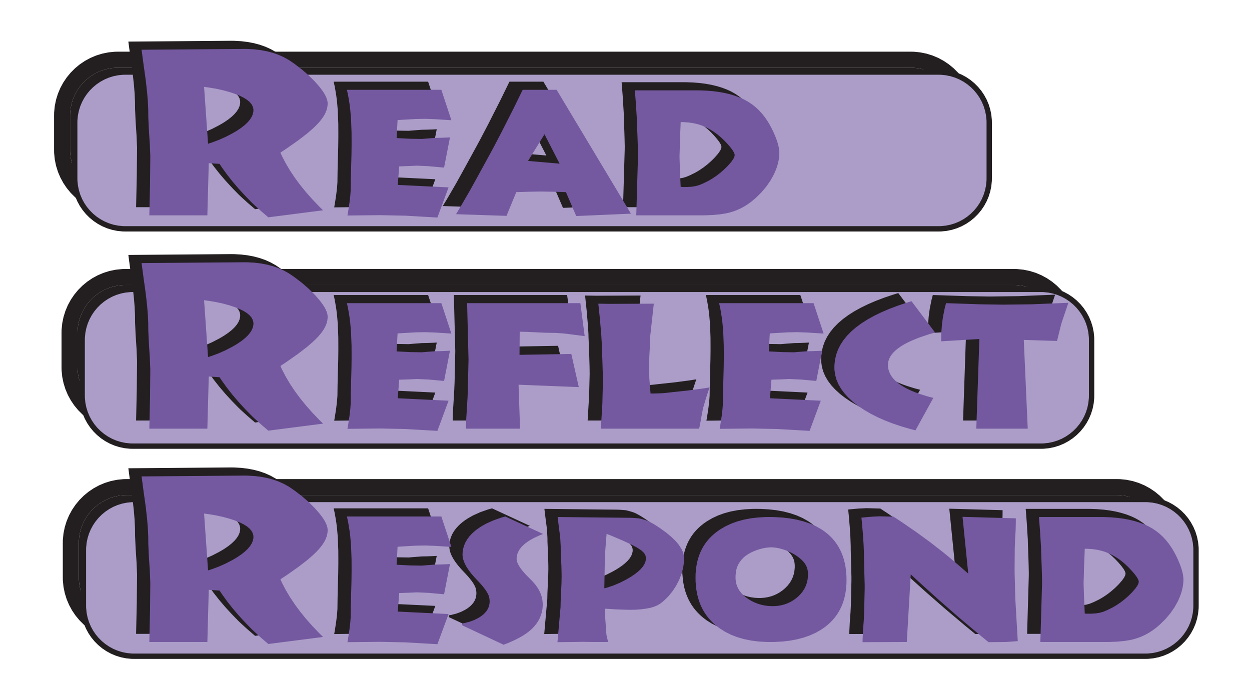


Read Reflect Respond

Nonfiction Comprehension Skill-Boosters



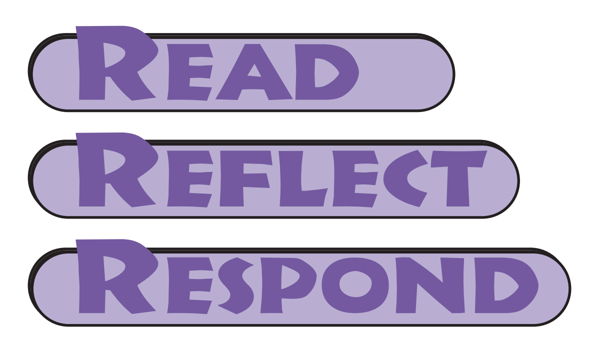




Comprehension Skill-Boosters

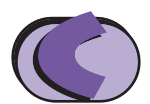


by JANICE GREENE













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CONTENTS

A NOTE TO THE STUDENT

How well do you understand and remember what you read? Can you count on your comprehension skills to meet the challenges of today's fast-paced world? The skill-sharpening exercises in the READ•REFLECT•RESPOND books can help you build confidence as you build competence.

The purpose of reading is to connect the ideas on the page to what you already know. That's why the short reading selections in these books work to your advantage. Each reading provides a clear mental framework for ideas and information. This makes it easier for you to grasp the main idea and sort out significant details. After you complete two or three lessons, you'll become familiar with the various kinds of responses required. This familiarity will alert you to important cues in the reading material. You'll learn to focus on key vocabulary, important facts, and the core message of the content. In short, you will become a more efficient reader.

We suggest that you thumb through each book before you begin the first lesson. Notice that the readings are engaging and informative—some are lighthearted and humorous, while others are more serious and thought-provoking. Glance at the question pages to see how they're organized. "Surveying" this book (or any book) in this informal way is called "prereading." It will help you "get a fix on" the task ahead.

Happy reading!

READ: *Leaps that could save your life.*

EMERGENCY JUMPS

Emergency jumps are dangerous. There's only one good time to attempt such a jump: when you'll probably die if you don't. Who knows? Someday you might need to make a literal leap. So be prepared! Here's some good advice for making two kinds of emergency jumps.

JUMPING FROM A BUILDING INTO A DUMPSTER

Landing in a dumpster is usually a safer bet than landing on the sidewalk.

Imagine jumping straight down. If you leap too far away from the building, you could miss the dumpster. So be careful. As you fall, pull your chin toward your chest and bring your legs around. What you're trying to do is land on your *back*. This is the safest way to make contact. When it hits, your body folds into a V shape, so landing on your stomach could break your back.

What if the dumpster is filled with bricks? In that case, falling into the dumpster would be as dangerous as jumping into the street. So look before you leap. If the dumpster is filled with clothes, cardboard boxes, or other such material, you're in luck. It's possible to survive a jump into a dumpster from five stories. All you need is the right kind of trash.

JUMPING FROM A BRIDGE OR A CLIFF INTO A RIVER

What's the most dangerous thing about this kind of jump? You don't know how deep the water is. If you're jumping into a river, try to jump as far away from the riverbank as you can. Stay away from bridge towers. Why? Debris collects there. You could be injured if you land on it.

Jump feet first. Keep your body completely vertical. If your body isn't straight, you could break your back. Squeeze your feet together. Squeeze your buttocks together, too. If you don't, the force of the rushing water may cause severe damage. Hold your hands over your crotch.

The moment you hit the water, spread your arms and legs. Move them back and forth. This will slow down your plunge toward the bottom. Jumping this way could break your legs—but it could also keep you alive.



REFLECT: *Think about emergency situations.*

1. Describe a situation when jumping from a building into a dumpster might save your life.

____

____

2. Describe a situation when jumping into a river from a bridge or cliff might save your life.

____

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Recall details. *(More than one answer may be correct.)*

1. In a jump from a bridge, why should you spread your arms and legs as you hit the water?
   a. to slow your plunge through the water
   b. to keep from hitting the river bottom
   c. to avoid hitting debris on the bottom

2. If you dive headfirst from a bridge into the water, you risk
   a. breaking your legs.
   b. breaking your skull.
   c. swallowing water.

3. If you jump into a dumpster, try to land (feet / back) first.

4. If you jump from a bridge, try to land in the water with your (feet / back) first.

Match words and meanings.

5. ____ debris — a. serious, dangerous
6. ____ vertical — b. to dive or fall suddenly
7. ____ severe — c. pieces of broken or destroyed things
8. ____ plunge — d. straight up and down; upright

Similarities and differences. *(More than one answer may be correct.)*

9. How might you be injured in either jump described?
   a. landing on hard or sharp debris
   b. getting crushed by air pressure as you fall
   c. holding your body in the wrong position

10. What is a significant difference between the two jumps?
   a. In a cliff jump, you try to guess the length of your fall.
   b. You position your body differently in each jump.
   c. In both jumps you try to avoid hitting obstacles.

Identify antonyms. *(Complete the words from the reading.)*

11. reckless / c__ __ __ __ __ __
12. die / s__ __ __ __ __ __
13. shallow / d__ __ __
14. safe / d__ __ __ __ __ __ __ __

Look it up in a reference source.

15. *The building is filling with smoke! Drop to your hands and knees and crawl to the nearest exit!*
   Why should you crawl rather than walk or run?

____

____

____

READ: *Can a common weed come to the rescue?*

PLANTS THAT DETECT LAND MINES

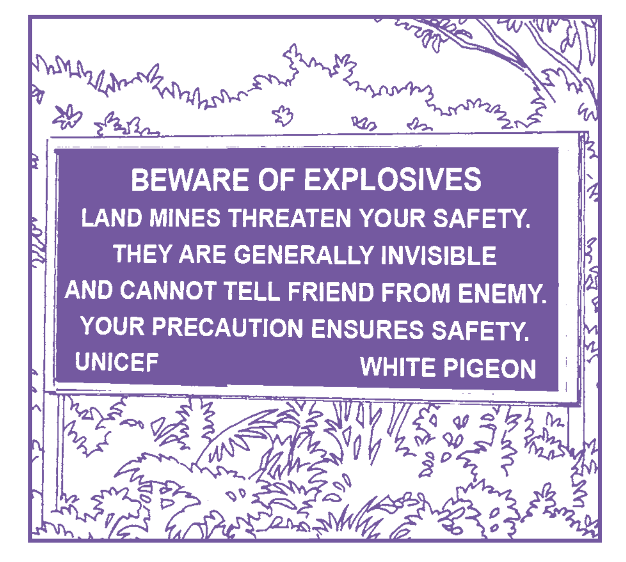
Land mines are explosives buried just below the surface of the ground. They're weapons of war. Some types are designed to blow up vehicles, such as tanks. Others are designed to blow up soldiers. Just a footstep on the ground can set them off.

Land mines are easy to make and put in place. After wars, the land mines are left buried in the ground. Today, tens of millions of explosives *still* lie just underground—in 80 countries! In these places, land mines maim or kill more than 8,000 people every year. And land mines also make the soil around them unfit for farming.

Recently a Danish company discovered a possible solution to the land-mine problem. It's a common weed called *thale-cress*. Scientists at the company actually altered the genes of the thale-cress. This caused the plant to develop a new characteristic. When it's planted near land mines, it turns red. The color is the plant's reaction to nitrogen-dioxide, a gas given off by the explosive material inside the land mines.



THE GREEN CRESS TURNS RED WHEN IT DETECTS EXPLOSIVES.



Thale-cress grows a few weeks after its seeds are scattered over a test area. If it turns red, the ground is dangerous. So the unexploded land mines are removed. If not, it's safe to walk there—or grow crops or build houses. The plant is still being studied. After all, it must work consistently in all soil types. Someday, however, the lethal danger buried beneath the soil may be wiped out by a common little weed.

REFLECT: *Think about weapons and safety.*

1. Name three weapons of war besides land mines and tanks.
   - ______________________
   - ______________________
   - ______________________

2. Think of a life-saving invention you wish someone would create.

   ____
   ____
   ____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Recall details.

1. What *two* purposes do land mines have?
   a. They lure people into certain areas.
   b. They destroy vehicles such as tanks.
   c. They kill soldiers who step on them.

2. What happens when thale-cress grows near a land mine?
   a. It dies.
   b. It keeps the mine from blowing up.
   c. It turns red.

3. What gas that affects thale-cress is given off by land mines?
   a. carbon dioxide
   b. nitrogen dioxide
   c. oxygen

4. How did scientists enable thale-cress to react to land mines?
   a. They altered its genes.
   b. They turned it red.
   c. They planted it near mines.

Identify the main idea.

5. The reading is about
   a. a weed that could be used to detect land mines.
   b. an old-fashioned method used to detect land mines.
   c. how land mines can be found all over the world.

Build your vocabulary.

characteristic	altered	lethal
scattered	defeat	maim

6. Something that is ________________ has been changed.

7. To ________________ something is to injure or cripple it.

8. ________________ seeds are thrown about in various places.

9. A ________________ is a feature that helps identify a person or thing.

10. If you ________________ enemies, you win a victory over them.

11. A ________________ attack would result in the victim's death.

Draw a conclusion. *(More than one answer is correct.)*

12. Why do land mines often do greater damage to children than adults?
    a. Children's bodies are smaller.
    b. Curious children pick up land mines.
    c. Children are less aware of the dangers.

Look it up in a reference source.

13. In 1997, many countries signed a treaty banning land mines. Many nations agreed to stop making and using them. In all, how many nations signed the treaty? ______________

READ: *Meet an awful man with an awesome talent.*

TY COBB

Ty Cobb, born in 1886, is famous for his marvelous baseball records. His record of 2,245 runs scored stood until 2001. His record of 892 stolen bases wasn't broken until 1979. His lifetime batting average was a remarkable .366. Cobb, also known as the Georgia Peach, was one of the greatest baseball players of all time. He was also a cruel and violent man.

No one knows when Cobb's troubles started. But they got worse when he was 18. That year, his father was shot to death by Cobb's mother, under suspicious circumstances. The week of his father's death, young Ty joined the major leagues, playing for the Detroit Tigers.

It was common for baseball teams to haze rookies, but Cobb was hazed without mercy. His fellow players shoved him aside in the batting cage. If he tried to talk to them, they ignored him. They broke his bats and wound his clothes in knots. One player even broke Cobb's nose.

As Cobb got better and better at his game, he also earned a reputation for nastiness. He was famous for ramming second basemen with his spikes. He even sharpened them to make the impact more painful. Easily angered, he got into fistfights with his teammates, umpires, and opposing players.

Off the field, Cobb beat his wives and children. He was a violent racist. Once he beat an African-American man—and his wife—for merely *touching* him. Talk about *mean*! He even stomped and kicked a paraplegic fan.

Cobb could also be generous, however. He was a smart businessman who made a fortune from baseball. He gave away millions to charity. And he enjoyed teaching young players.

But Cobb's meanness finally drove everyone away. He married several times, but one after another his wives left him. Even his children kept their distance. Eventually, all of his friends walked away. Tyrus Cobb died in 1961. Only three people who knew him well took the time to come to his funeral.

REFLECT: *Think about troubled people.*

1. If you owned a baseball team, would you want someone like Ty Cobb to be on it? Why or why not?

____

____

2. Suppose a man had a terrible time in his teen years. Should he be forgiven for being mean as an adult?

____

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Build your vocabulary.

paraplegic	suspicious	hazing
circumstances	rookie	impact

1. ________________ means giving a newcomer a rough time.
2. An athlete who's just begun to play a professional sport is a ________________.
3. The effect of one object striking another is called an ________________.
4. If your legs are paralyzed, you're a ________________.
5. ________________ are the conditions at a certain time or place.
6. To be ________________ is to think there is guilt but have no proof.

Draw conclusions.

7. If Ty Cobb were a baseball player today, he
(More than one answer may be correct.)
   a. probably wouldn't be hazed so cruelly.
   b. would be likely to receive counseling.
   c. couldn't get away with spiking players.

8. Why did so few people attend Cobb's funeral?

____

____

Recall details.

9. Describe a low point in Cobb's life.

____

____

10. Describe a high point in Cobb's life.

____

____

11. Name two good things Ty Cobb did.
   - ____________________________
   - ____________________________

12. Name two awful things Ty Cobb did.
   - ____________________________
   - ____________________________

Look it up in a reference source.

13. Who broke Cobb's record for stealing bases?

____

14. Who broke Cobb's record for runs scored?

____

READ: *Bigger doesn't always mean better.*

NANOTECHNOLOGY

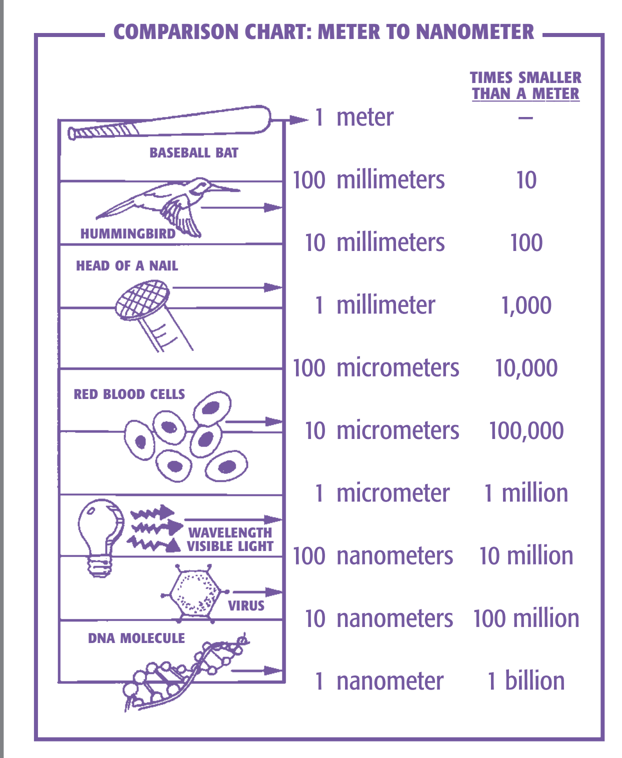
What is *nanotechnology*? The prefix "nano" comes from the Greek word *nanos*, meaning "dwarf." Technology is the use of science for practical purposes. Nanotechnology is the science of developing extremely small devices and materials.

How small? In nanotechnology, things are measured in *nanometers*. A nanometer is one billionth of a meter. To give you a better idea of just how tiny that is, a strand of hair is 80,000 nanometers thick.

Why are people interested in working with things this tiny? This field of study has great potential. When manipulated atom by atom, materials change. Carbon, for example, becomes surprisingly strong. Experts believe that nanotechnology can make almost anything smaller, stronger, and more powerful.

Nano-materials are in use today. Nano-sized clay particles are already used to strengthen car bodies. Other nano-materials are used in tennis balls, wrinkle-resistant clothing, and sunscreen.

Possible applications of nanotechnology are endless. Here are just two ideas: nano-robots might patrol your bloodstream and attack viruses. And nano-robots could be used to clean up oil slicks and toxic spills.



Today, those are only ideas. In the future they could become reality.

Meanwhile, nano-materials must be studied very carefully. There have been serious concerns about their safety. Some nano-materials have a toxic effect on living things. Many people are concerned about the effect of these nano-materials on the environment.

Nanotechnology can make our future world better—or worse. It's up to us.

REFLECT: *Think about large and small objects.*

1. Think of an object that's about 10 times as thick as a human hair. What is it? ______________________

2. A nanometer is 80,000 times thinner than a strand of human hair. Can you name an object that's about 80,000 times *thicker* than a strand of hair? Take a guess. ______________________

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Build your vocabulary.

device	concerns	carbon
toxic	resistant	virus

1. A poisonous material is described as ________________.
2. If you have ________________ about something, you're worried about it.
3. A ________________ is a tool invented for a special purpose.
4. A microscopic agent that causes infectious disease is a ________________.
5. ________________ is a nonmetallic element that exists in many inorganic and all organic compounds.
6. A spill of grape jelly could be easily removed from a stain-________________ material.

Recall details.

7. Materials (change / disappear) when they're made to be extremely small.
8. A nanometer is one (millionth / billionth) of a meter.
9. Nano-materials (are in use today / may be used in the future).
10. The Greek term *nanos* means (dwarf / small).
11. A strand of hair is much (thinner / thicker) than a nanometer.

Making inferences. (Write T for true or F for false.)

12. ____ Certain nano-materials could poison an animal.
13. ____ Nano-materials could be used in body armor.
14. ____ There's no money to be made in nanotechnology.
15. ____ Nano-materials cannot be seen with the naked eye.

Use the chart.

16. A baseball bat is approximately ____ times larger than a DNA molecule.
    a. 1 million
    b. 1 billion
    c. 1 trillion

Look it up in a reference source.

17. Name three examples of *nanoplankton*.
    - ________________________
    - ________________________
    - ________________________

READ: *She risked her life to help girls learn.*

SAKENA YACOOBI

As a child in Afghanistan, Sakena Yacoobi dreamed of becoming a doctor. She wanted to help women in her country lead better lives. But she probably never imagined she'd risk her own life to help them learn to read.

In the late 1990s, the Taliban took over Afghanistan. Their laws were harsh. They outlawed music and television. Men could be jailed for shaving their beards. Women were not allowed to work, and girls could not go to school.

When the Taliban rose to power, Yacoobi was living in the United States. She had graduated from college and was working here. Yacoobi could have remained in the United States and lived a comfortable life. But instead, she returned to Afghanistan. There, along with two other women, she set up and managed 80 secret schools for girls.



The schools were in basements or rooms with blacked-out windows. Girls were told not to come to school in groups, but to arrive one by one.

Once, the secret schools were nearly discovered. After a British woman had visited one of the schools, word leaked out. The Taliban authorities prepared to raid the school.

Luckily, someone told the teachers that the Taliban were coming. "They scattered the children," Yacoobi remembers. "They put away the books and covered up the blackboards. When the authorities arrived, the teachers said, 'What? We have no school here.' We came *this* close to being caught," Yacoobi says, bringing her thumb and forefinger very close together.

After September 11, 2001, the United States and its allies drove the Taliban from power. Now Afghanistan's new government is running schools for all children. Yacoobi continues to help women and children in her country and in Pakistan. She is also one of the leaders of the Global Fund for Women located in San Francisco, California. This organization provides money for women to set up businesses, health clinics, and schools.

REFLECT: *Think about education.*

1. Imagine that education for girls was suddenly forbidden in the United States. Write two sentences describing what you think would happen.

____

____

2. What do you think are the most important things that schools teach?

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Match synonyms.

1. ____ harsh — a. forbid
2. ____ allies — b. operated
3. ____ managed — c. partners
4. ____ authorities — d. strict
5. ____ outlaw — e. officials

Recognize gestures.

You make a gesture when you hold your thumb and forefinger close together. A *gesture* is a meaningful body signal that takes the place of speech.

6. Which of the following are gestures?
   a. a circle with a line through it
   b. holding your thumb up
   c. putting a finger to your lips

Interpret figurative language.

Some expressions have different meanings than the literal meaning of the words.

What do the following figurative phrase and sentence mean?

7. "Word leaked out" means
   a. the news spread.
   b. the words dripped out.

8. "They scattered the children" means they
   a. told them never to come back.
   b. sent them off in different directions.

Draw conclusions. *(More than one answer may be correct.)*

9. Girls were told not to arrive at school at the same time. Why?

____

____

10. The reading suggests that Sakena Yacoobi
    a. knows the problems women face in many countries.
    b. has traveled to many different countries.
    c. is an expert on sports around the world.

Put events in order.

11. Number the events to show the order in which they happened.

____ Yacoobi sets up secret schools.

____ Yacoobi returns to Afghanistan.

____ The Taliban is driven from power.

____ One of Yacoobi's schools is nearly raided.

____ Yacoobi is educated in the United States.

Look it up in a reference source.

12. Why did the United States and its allies attack the Taliban?

____

____

____

READ: *A look at daily life some 2,000 years ago.*

A DAY IN ANCIENT ROME

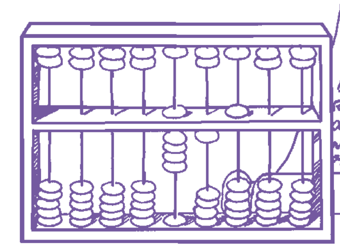
Days began early in ancient Rome. Before dawn, the streets were busy as laborers and small shop owners hurried to work. Many of them carried oil lamps to light their way.

In houses and apartments, slaves went around to bedrooms to wake up their masters. People got up and washed their faces and hands in bowls of water. Then they dressed in tunics and leather sandals. Men wore togas over their tunics.



Before leaving home, people prayed in front of their family shrine. The shrine was a special place of honor for images of the gods who looked after the family.

If the family was wealthy enough, the boys went to school. Their teachers were paid by their parents. Students learned reading, writing, and arithmetic. Lessons were written on



long rolls of paper called *scrolls*. An abacus was used for teaching arithmetic. Older boys studied public speaking, Latin grammar, math, and Greek.

Girls were taught reading, writing, and music at home. There they also learned how to run a house.

In the afternoon, men and boys often went to the public baths. (Women went in the morning.) Hardly anyone had a bath at home. Besides keeping clean, the ancient Romans enjoyed going to the baths to visit friends. Men could also exercise in the sports area.

The evening meal was served about six o'clock. Soon after dinner, it was bedtime. Few Romans could afford to keep their oil lamps burning into the night. So, as soon as darkness fell, the day was over.

REFLECT: *Think about ancient Rome.*

1. Circle the words or phrases associated with ancient Rome.

mud huts	gladiators
the Coliseum	knights in armor
chariots	ice skating

2. Would you have enjoyed living in ancient Rome? Why or why not?

____

____

____

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Build your vocabulary.

tunic	grammar	toga	abacus

1. ________________ is the system of rules for speaking and writing.
2. A ________________ is a loose outer garment usually worn over a ________________.
3. A ________________ is a loose-fitting garment extending to the knees. It is often worn under a ________________.
4. An ________________ is a manual computing device that uses parallel rods strung with movable counters.

Recognize parts of speech.

5. In the sentence, *"Girls were taught how to* run *a house," run* is a (noun / verb).
6. In the sentence, *"As soon as darkness* fell, *the day was over," fell* is a (noun / verb).

Draw a conclusion.

7. What language was spoken in ancient Rome?

   ____

Provide antonyms.

8. The word *public* is the opposite of p_ _ _ _ _ _ .
9. The word *ancient* is the opposite of m_ _ _ _ _ .

Compare and contrast.

10. Name one *similarity* between a day in ancient Rome and a day in your own life.

    ____

    ____

11. Name three *differences* between a day in your life and a day in ancient Rome.

    - ______________________________
      ____
    - ______________________________
      ____
    - ______________________________
      ____

Make inferences. (Write ***T*** for true or ***F*** for false.)

12. ____ Ancient Romans kept themselves very clean.
13. ____ The climate in Rome must be fairly warm.
14. ____ Many men in Rome gave speeches.
15. ____ Schools were free to the public.
16. ____ Girls were trained to be leaders.
17. ____ Children always did their homework after dinner.

Look it up in a reference source.

18. What are the approximate dates of the beginning and end of the Roman Empire?

    ____

READ: *Are you aware that symbols represent ideas?*

POLITICAL SYMBOLS

The symbol for the Democratic Party, the donkey, was first used in the 1828 presidential campaign. Democrat Andrew Jackson's opponents called the candidate "a stubborn jackass." But Jackson was proud of his reputation for stubbornness. So he began to use the image of a donkey on his campaign posters. Ever since then, the donkey has been associated with the Democrats.

The symbol for the Republican Party is the elephant. This symbol was invented by Thomas Nast, a famous political cartoonist.

In 1874, some people thought that Ulysses S. Grant might run again for president. President Grant, a Republican, had already served two terms. The rumors said he might try for a third term. At the same time, there were rumors that animals had escaped from a zoo in New York City. It turned out that the rumors about the zoo animals weren't true. But that had given Thomas Nast an idea. Because he didn't like Grant, Nast drew the Republican Party as an elephant running wild. From that day on, the elephant remained the symbol of the Republican Party.

When we see the swastika, we think of Nazis. But originally, this ancient design meant something completely different. It was a Hindu symbol that represented the sun's daily path across the sky. In fact, the swastika appears on religious objects all over the world. Objects decorated with swastikas have been found in the Middle East, Asia, North America, and South America. When Adolph Hitler rose to power in Germany, he chose the swastika as the symbol of the Nazi Party.

REFLECT: *Think about familiar symbols. The symbol for "no smoking," for example, is a cigarette in a circle with a slash running through it. What other symbols do you know?*

1. Name a symbol you see every day. What does it stand for?

____

____

____

____

2. Name an idea or object that is represented by a symbol. (For example, a commonly used symbol for love is a heart.)

____

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Build your vocabulary.

1. *Associated* things are
   a. items you've seen before.
   b. connected in some way.
   c. different from one another.

2. You *represent* something when you
   a. talk about it.
   b. stand for it.
   c. fight against it.

3. In a political race, your *opponent* is
   a. one of your supporters.
   b. your running mate.
   c. running against you.

4. An *image* of a person or a thing is
   a. an original, artistically drawn symbol.
   b. a picture or likeness of it.
   c. ghostly visitation.

Draw conclusions. (Write **T** for true or **F** for false.)

5. ____ Jackson's opponents were probably frustrated when he used the donkey image in his campaign.

6. ____ Today, when people think of the Republican Party, they think of elephants running wild.

7. ____ If Ulysses S. Grant had been elected for a third term, he would have served 12 years as president.

8. ____ Political cartoons are usually flattering; they show people in the best light possible.

9. ____ Many people were probably upset that Adolph Hitler used a Hindu symbol for the Nazis.

Identify the main idea.

10. This reading is about
    a. how political cartoons influence voters.
    b. the history of symbols used to represent three political parties.
    c. the wide variety of symbols used in politics.

Match synonyms.

created	stubborn	religious	rumors

11. obstinate / ________________________
12. gossip / ________________________
13. sacred / ________________________
14. invented / ________________________

Look it up in a reference source.

15. What symbol of the South in America's Civil War still causes controversy when it's displayed?

    ____

READ: *These people were outcasts at the birth of our nation.*

THE LOYALISTS

Before the United States of America came into being, we were 13 colonies, under the rule of Great Britain. Then in 1775, the colonists rose up against their "mother country," Great Britain. Their rebellion started America's Revolutionary War. Many of today's Americans assume that the colonists were united in their fight against the British rule. But that assumption is wrong.

As many as *one-third* of the colonists were against the war. Loyal to England's King George III, they were called Loyalists, or Tories. The Loyalists were happy to be part of Great Britain. After all, it was a powerful country. Loyalists were afraid that without British protection, the colonies might be claimed by France or Spain. None of them believed that the colonists would stand a chance in a war against the mighty British army.

LOYALIST OATH

"I voluntarily take this oath to bear faith and true allegiance to His Majesty King George the Third; and defend to the utmost of my power, His sacred Person, Crown and Government, against all persons whatsoever."

PATRIOT OATH

"I do acknowledge the United States of America to be Free, Independent and Sovereign States, and declare that the people thereof owe no allegiance or obedience to George the Third, King of Great Britain; and I renounce, refuse and abjure any allegiance or obedience to him; and I do swear that I will, to the utmost of my power, support, maintain and defend the said United States, against the said King George the Third, his heirs and successors."

The colonists who were *for* the war called themselves patriots. They despised the Loyalists and considered them traitors. Many Loyalists were forced to sign pledges of allegiance to the patriots. Sometimes they signed only after being coated with hot tar and feathers!

When the war began in 1775, many states passed laws against the Loyalists. Some of these laws forbade Loyalists to vote or hold office. Many Loyalists had their property confiscated.

During the war, thousands of Loyalists fought for the British. Many others fled the country and settled in Canada. But many stayed. After the war, hatred of the Loyalists gradually died down. By 1812, most of the laws against them had been repealed.

REFLECT: *Think about colonial times.*

1. Circle the events that took place *before* the colonies became the United States of America.

   Boston Tea Party — the Patriot Act

   Paul Revere's ride — War of 1812

2. Name one fact you know about the Revolutionary War.

   ____

   ____

   ____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Recall details. *(More than one answer may be correct.)*

1. The Loyalists were colonists who
   a. fought for independence.
   b. disliked King George.
   c. were loyal to Great Britain.

2. How many colonists were Loyalists?
   a. about one-third of them
   b. most of New York
   c. a few hundred

3. When the Revolutionary War began, many Loyalists fought
   a. on the side of the British.
   b. against the British Army.
   c. against the colonists.

4. Some states passed laws against Loyalists. These laws
   a. prevented them from holding office.
   b. banned them from voting.
   c. confiscated their houses and land.

5. Many colonists felt that those who fought on the side of the British were
   a. patriots. b. valuable. c. traitors.

6. How did many Loyalists react to their harsh treatment by the patriots?
   a. They became patriots, and joined the fight against the British.
   b. They left the colonies, many of them settling in Canada.
   c. They asked France to join the British against the patriots.

Build your vocabulary.

7. ____ united
8. ____ pledge
9. ____ confiscate
10. ____ allegiance
11. ____ repeal

a. to officially take away
b. a serious promise
c. joined together
d. loyalty to a cause or country
e. cancel or revoke

Match antonyms. *(Complete the words from the reading or the oaths.)*

12. weak / p_ _ _ _ _ _ _
13. adored / d_ _ _ _ _ _ _
14. suddenly / g_ _ _ _ _ _ _ _
15. least / u_ _ _ _ _
16. allowed / f_ _ _ _ _ _
17. accept / r_ _ _ _ _ _ _
18. dependent / s_ _ _ _ _ _ _ _ _

Look it up in a reference source.

19. About how many black slaves fought on the British side in America's Revolutionary War?

    ____

    What were they called?

    ____

    Why did they fight for the British?

    ____

    ____

READ: *A tough sport for tough athletes.*

THE SPORT OF KINGS—AND QUEENS!

Horse racing is a very dangerous sport. Unlike other riders, jockeys don't *sit* on their horses. They balance on their toes in the stirrups and lean over the horse's neck. One good jolt can send them flying. If these petite individuals fall off, they risk being trampled by a 1,200-pound horse!

Injuries are common. The horses can also be difficult. They're high-strung and easily spooked. Sometimes horses buck, crash into gates, or just take off. California jockey Russell Baze has had his collarbone broken twice and his back fractured four times. His wrist and pelvis have also been broken, and he's suffered several concussions.

Serious injuries affect not only the body, but the pocketbook. There is no paycheck for an injured rider. Very few jockeys are wealthy.

Jockeys are mostly male. However, females entered the sport in the late 1960s, and their numbers are growing. And while there are several successful women jockeys, there is still discrimination. They are often preferred as morning exercise riders while being snubbed for afternoon race mounts. Even the top female jockeys seldom get the best horses.

So why would *anyone*—male or female—struggle to be a part of this grueling sport? Perhaps for the thrill of the ride.

Thoroughbred race horses *love* to race. Even without riders, they will race each other. The jockeys hold them back for most of the race. Why? The horses must save their strength. Then, in the last quarter of the race, the jockeys let them go. The surge forward can be beautiful. Jockey and horse are in perfect rhythm. The rest of the world seems to stand still as the finish line looms ahead. Now horse and jockey push ahead with all the heart and strength they've got. And if they're lucky, they win.

REFLECT: *Think about women and men in the workplace.*

1. Name three jobs that in past years were mostly "men only."
   - ____________________
   - ____________________
   - ____________________

2. Now name three jobs that in past years were mostly "women only."
   - ____________________
   - ____________________
   - ____________________

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Build your vocabulary.

1. A *concussion* is an injury to the (collarbone / brain).
2. If you often get *spooked*, you're easily (surprised / frightened).
3. A *grueling* activity is (easy / hard).
4. If you're naturally a *high-strung* person, you're (smart / tense).
5. A *crack* or *break* in a bone is called a (suture / fracture).
6. A *thoroughbred* is a pure breed of racehorse that (descended / ascended) from English mares and Arabian stallions.
7. If you're *jolted* out of your seat, your bus probably stopped (slowly / suddenly).

Draw conclusions.

8. Circle the words that describe a skillful jockey.

cautious	strong	horse-lover
chubby	fearful	small

Recall details. *(Write* ***T*** *for true or* ***F*** *for false.)*

9. ____ Female jockeys often get to ride the best horses.
10. ____ Jockeys hold their horses back until the last part of the race.
11. ____ Most jockeys make a fortune racing horses.
12. ____ Jockeys sit down in the saddle and lean over the horse's neck.
13. ____ Racehorses are often tense and easily scared.
14. ____ Racehorses aren't naturally competitive.
15. ____ Owners prefer to have male jockeys exercise their horses.
16. ____ Female jockeys no longer face discrimination in the world of racing.

Match words and meanings.

17. ____ petite
18. ____ snub
19. ____ mount
20. ____ discriminate

a. an animal on which to ride
b. to ignore or behave coldly toward
c. to act on the basis of prejudice
d. small, slender, and trim

Look it up in a reference source.

21. How many miles per hour does a thoroughbred racehorse usually run?

____

22. What's the average annual income for a jockey?

____

READ: ***Are the sounds you hear in a movie "real"?***

SOUND EFFECTS

When a crew films a scene in a movie, they also record the sounds being made, right? Wrong. There's too much background noise. Unwanted noise comes from everywhere. It might be the sound of nearby cars, airplanes flying overhead, people moving around off-screen—you name it. Even in a soundproof studio, cameras can be noisy.

And there's another reason: real sounds don't sound real on film. Why? Because recording devices aren't perfect. For example, the "crack" of a baseball bat may need to have an echo sound added. The echo would make the "crack" sound as if it's happening in a big space—like a ballpark.

Every single background sound you hear has been added. For example, imagine a family having dinner. Sounds might be added to simulate the clink of silverware and dishes. The hum of a refrigerator might be heard, too, or the noise of distant traffic. The sounds of chairs moving and the brush of clothes against those chairs must also be added. Many of these sounds have to match the movements of the actors in the scene.

Sound experts have huge libraries of recorded sounds. They might have 50,000 CDs of sounds—and even more stored on a computer. And sound experts are always creating new sounds.

Probably the most famous sound designer is Ben Burtt. He invented the sounds for *Star Wars*. Here are a few of the sounds he created:

- ***Wookie language:*** a blend of walrus calls and other animal sounds
- ***Darth Vader's breathing:*** Burtt himself, breathing with scuba equipment
- ***Luke's landspeeder:*** sounds of a freeway, recorded through a vacuum-cleaner hose
- ***Light saber:*** blended noise from a TV set and a 35mm projector
- ***Ewok language:*** a combination of Nepali, Mongolian, and Tibetan language (spoken by the peoples of Nepal, Mongolia, and Tibet) plus some made-up words.

For more on *Star Wars* sound effects, you can visit www.filmsound.org/starwars or www.skysound.com on the Internet.

REFLECT: ***Think about sound—and movies.***

Think about sound effects used in movies, including musical scores. Do you think these sounds add to or detract from the movie? Explain your answer.

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Identify examples.

1. Sound contributes a lot to the mood of a movie. Think of one sound that could make a horror movie scarier.

   ____

2. Circle actions that could be done *silently*.

   thinking rubbing scraping wondering

   writing breathing twisting forgetting

3. "Whack" is both a sound and an action. Circle the words below that are both sounds and actions.

   fight hum blend crack pop mix

Recall details. *(Write **T** for true or **F** for false.)*

4. ____ Background noise includes the sounds of the main characters' voices.
5. ____ Sound effects are often a blend of electronic and everyday sounds.
6. ____ Sound experts are always adding to their sound collections.
7. ____ In a movie, sound effects are made while scenes are being filmed.
8. ____ In every scene, sounds must be added at just the right moment.
9. ____ Ewok language is a combination of Nepali, Mongolian, and Taiwanese.

Make inferences. *(Choose appropriate sounds for three robots.)*

10. The first robot is old and slow-moving. The best sounds for it might be
    a. high-pitched chirping sounds.
    b. creaky, rusty sounds.
    c. light-footed, quiet sounds.

11. The second robot is speedy and comical. The best sounds for it might be
    a. whirring, chirping sounds.
    b. heavy-footed, clanking sounds.
    c. harsh, grating sounds.

12. The third robot is swift-moving and dangerous. The best sounds for it might be
    a. swishing, hissing sounds.
    b. delicate, tinkling sounds.
    c. light, watery sounds.

Identify synonyms. *(Complete each word pair with a synonym from the box.)*

imitate	combine	machine

13. device / ______________________
14. simulate / ______________________
15. blend / ______________________

Look it up in a reference source.

16. What is a Foley artist?

    ____

    ____

    ____

READ: *Dental hygiene has an interesting history.*

EVER TWIG YOUR TEETH?

The first nylon toothbrush came out in 1938. Unfortunately, the bristles were so hard, they damaged people's gums. Eventually, after a few changes were made, nylon toothbrushes became safer to use. They are what most people in the United States use today.

Before nylon toothbrushes, people cleaned their teeth in several different ways. Some used animal bristles, usually taken from pigs. Others used sand, leaves, or even their fingers. In Egypt, about 3000 B.C., people cleaned their teeth with a tooth "stick." This was a twig that had one end frayed into bristles. The other end was the handle.

You'll find this hard to believe, but most early toothpastes had urine in them. Yes, really! Urine contains ammonia, and ammonia is an excellent cleanser. Many formulas for toothpaste today still use ammonia—but not in the form of urine.

As people get older, their teeth gradually turn from white to yellow. That's a shame, because white teeth have always been prized. In the Middle Ages,



dentists whitened people's teeth by filing away the tooth enamel. Then they coated the teeth with nitric acid. For a while, the teeth would look pearly white. Then they would decay. Even today, we don't have a magic secret for turning teeth white. Brushing and flossing can reduce stains. But be wary of products that promise perfectly white teeth. Many products contain harsh abrasives that can damage the tooth enamel. So always talk to a dentist before trying to whiten your teeth.

REFLECT: *Think about how you groom yourself in front of the mirror.*

1. Besides brushing your teeth, what do you do in front of the mirror in the morning?

   ____

   ____

2. Name two grooming products that weren't around in ancient Egypt.

   • ____________________ • ____________________

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Build your vocabulary.

frayed	enamel	wary	abrasive	harsh

1. An ________________ substance scrapes or grinds.
   Sandpaper is ________________.
2. ________________ is the hard outer layer of the teeth.
   Decay can eat through ________________.
3. ________________ means separated into loose ends.
   The ends of her old shoelaces eventually got ________________.
4. ________________ means rough or irritating.
   Gravel feels ________________ against bare feet.
5. If you're ________________, you're careful or cautious.
   Be ________________ of unlit parking lots at night.

Identify the main idea.

6. What is the main idea of this reading?
   a. People can damage their teeth if they're not careful.
   b. In the past, people used various methods to clean their teeth.
   c. Today's dental care is better and safer than it was in years past.
7. Write one *detail* from the reading that supports the *main idea* you selected.

   ____

   ____

Recall details.

8. What can help to get rid of stains on teeth?

   ____
9. What substance in urine is a cleaning agent?

   ____
10. What process makes teeth look yellow?

    ____
11. Does modern toothpaste contain urine?

    ____
12. What can harsh abrasives do to tooth enamel?

    ____
13. What harm can stiff toothbrush bristles do?

    ____

Match synonyms.

14. ____ decay — a. valued
15. ____ reduce — b. rot
16. ____ stains — c. lessen
17. ____ prized — d. discolorations

Look it up in a reference source.

18. What do modern dentists do to help people who want to hide their unsightly teeth?

    ____

    ____

READ: *What happened to the "fourth" plane on 9/11?*

FLIGHT 93

On September 11, 2001, United Airlines Flight 93 was scheduled to depart at 8:00 A.M. Instead, it left New Jersey 42 minutes late. It was headed toward San Francisco.

About an hour into the flight, air traffic controllers heard something strange. Sounds of a struggle were coming from the cockpit! A few minutes passed. Then a man's voice announced in heavily accented English, "This is your captain. We've been advised that there is a bomb on board. Everyone should remain calm as we return to the airport."

But the plane wasn't headed back to New Jersey. It was now flying toward Washington, D.C.

Passengers on the plane began calling people on their cell phones. Passenger Mark Bingham told relatives that the plane had been hijacked.

The people who were called told the passengers the terrible news. The United States was being attacked by terrorists! Three planes had crashed into the World Trade Center and the Pentagon.

As Todd Beamer talked to a telephone supervisor, she could hear passengers wailing in the background. Beamer told her that he and some of the passengers planned to rush the hijackers.

The plane was getting closer to Washington, D.C. The White House had been evacuated. Fighter jets were in the air, ready to shoot down any suspicious planes.

It was almost 10:00 A.M. when flight attendant Sandra Bradshaw called her husband. She said she was boiling water to throw on the hijackers. Passenger Jeremy Glick told his wife about the passengers' plan to take back the plane.

Todd Beamer ended his call to the supervisor. As he did, she heard him say to someone, "Are you ready? OK, let's roll."

Jeremy Glick's wife couldn't stand to listen anymore. She handed the phone to her father. He heard some noise, then screams. He said the sounds reminded him of a roller coaster. Then the phone went dead.

The plane crashed to the ground in rural Pennsylvania. Everyone aboard was killed. What if the hijackers hadn't been stopped? The plane's ultimate target could well have been the White House!

REFLECT: *Think about 9/11/01.*

1. Write a few sentences about September 11, 2001. What do you remember about it? How did you feel when you heard the news?

____

____

____

2. Do you think the United States will be attacked again? Explain your answer.

____

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Match words and meanings.

1. ____ supervisor
2. ____ evacuated
3. ____ wailing
4. ____ rural

a. making long, sad cries

b. someone who watches over other people's work

c. having to do with the country

d. withdrawn from a dangerous area

Put events in order.

5. Number the events to show the order in which they happened.

____ Sandra Bradshaw boiled water to throw at the hijackers.

____ Flight 93 took off from New Jersey 42 minutes late.

____ Flight 93 crashed in rural Pennsylvania, killing everyone.

____ Air traffic controllers heard sounds of a struggle on the plane.

____ The passengers learned of the attacks in New York and the Pentagon.

Recall details. (Write ***T*** for true or ***F*** for false.)

6. ____ An attendant planned to throw hot coffee on the hijackers.
7. ____ Flight 93 changed its destination.
8. ____ Six planes had crashed into the Pentagon.

Draw a conclusion.

9. The passengers on Flight 93 had heard about the attacks on the Pentagon and the World Trade Center. But suppose they did *not* know about the other attacks. Do you think they would still have fought the hijackers? Explain your answer.

____

____

____

____

____

____

Activate prior knowledge.

10. The World Trade Center consisted of (two / three) tall buildings.
11. The Pentagon is the headquarters of the U.S. Department of (State / Defense).

Look it up in a reference source.

12. With what were the hijackers armed?

____

____

____

13. How did their weapons get past security?

____

____

READ: *How can you tell if a photo has been faked?*

PHOTOSHOP FAKERY

Pictures don't lie, right? Wrong. Sometimes they do. Images taken with a digital camera can be altered. With computer programs like Photoshop, you can combine two or more images. It's easy to do, and the photo looks real. Sometimes the result can be funny. For example, you can put your brother's head on the body of the family dog. Sometimes, though, the result can hurt people. For example, imagine a photo of your city's mayor taking cash from a crook. If the photo is real, that's one thing. But if it's a fake, the mayor's reputation is ruined—unfairly.

But now there's a way to tell if a photo has been altered. Hany Farid, a college professor, recently invented software that detects fake photos.

Here's how it works: Every digital photo is made up of pixels. Each pixel represents a small piece of coded information. Farid's program looks for the patterns of pixels in the photo. A photograph that hasn't been changed shows normal patterns. A photograph that has been changed shows *abnormal* patterns.



Many distressed people call Farid, looking for help. They say they're victims of Photoshop fraud. For example, a Brazilian model once asked for Farid's assistance. She claimed that a beer company put a photo of her head on the body of another woman in an ad. Farid provided the proof she needed to force the brewery to stop running the ad. "You gotta love this job," Farid said, "if you've got supermodels calling you!"

REFLECT: *Think about pictures.*

1. What do you think affects people more—words or pictures? Why?

____

____

2. Have you ever seen a photo of yourself and thought, "That doesn't look like me."? Describe the photo.

____

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Match words and meanings.

fraud	code	image	abnormal

1. A set of words or symbols used to send messages is a kind of ________________.

2. An ________________ is a picture or other likeness of a person or thing.

3. A ________________ is something that tricks or cheats—a fake.

4. Something that is ________________ is not normal, average, or usual.

5. *Normal* and *abnormal* are
   a. synonyms.
   b. nouns.
   c. antonyms.

Identify the main idea.

6. What's the main idea of the reading?
   a. Fake photos can ruin people's reputations.
   b. A new software program can detect fake photos.
   c. A model says she's the victim of fraud.

*Fact or opinion? (Write **F** for fact or **O** for opinion.)*

7. ____ Faked digital photographs can be amusing.

8. ____ Many people say they're the victims of fraud.

9. ____ With Photoshop, you can combine images.

10. ____ "You gotta love this job."

Recall details.

11. Digital photographs are made up of (pixels / images).

12. Farid's program looks at (patterns / software) in photos.

13. Farid's program can be used to detect (who last used a camera / changes made to a photograph).

Give an example.

14. Farid's program is an example of computer *software*. Name one example of computer *hardware*.

    ____

Identify synonyms. (Complete the words from the reading.)

15. upset / d_ _ _ _ _ _ _ _ _

16. envision / i_ _ _ _ _ _

17. outcome / r_ _ _ _ _

18. created / i_ _ _ _ _ _ _

Look it up in a reference source.

19. Write the dictionary definition of the word *pixel*.

    ____
    ____
    ____
    ____
    ____

READ: *What were the best-selling cars of all time?*

THE TIN LIZZY AND THE BUG

Henry Ford had big plans when he started the Ford Motor Company. He wanted to make a car that almost everyone could afford. In 1908, when the Model T first came out, it cost $850. At the time, this was still too expensive for most people. To cut costs, Ford's company invented the assembly line. This innovation increased the speed of production and cut costs. In 1925, a Model T cost only $290. By 1927, some 68 percent of the *world's* cars were Model T's—also called "Tin Lizzies." People loved them!

Ford kept his car simple. The Tin Lizzie had the same design every year. It had no extras at all—not even a speedometer! It was dependable, easy to fix, and came in one color: black.

The idea for the Volkswagen Beetle—the bestselling car of all time—came from Adolph Hitler. The German dictator wanted to mass-produce a car that the average man in the street could afford.

Hitler assigned the task of designing this special car to Ferdinand Porsche. He specified certain criteria the car must meet. It must have a top speed of 62 mph and achieve 42 miles per gallon of gas. It must have an air-cooled engine and be able to transport two adults and three children.

Hitler also had plans for the styling of the car. He is reputed to have said, "It should look like a *beetle*. You have to look to nature to find out what streamlining is."

The first *Volkswagen* (German for "the people's car") made its debut in 1939. Production soon ended, however, with the onset of WW II.

But the Volkswagen Beetle—also known as the "Bug"—did not fade away. It made a comeback in 1945. Like the Model T, the Beetle wasn't fancy, but it was cheap. It was also dependable and easy to fix. And Volkswagen didn't come out with a new design for the Beetle every year. With only minor changes, the Germans continued to build Beetles from 1945 to 1979. Today, however, the "original-design" Beetle is made only in Mexico.

REFLECT: *Think about cars.*

1. What features are most important to you in a car? Looks? Dependability? Price? Explain your answer.

___

___

___

2. Name two or three of your favorite makes or models of cars. Explain why you like them.

____

____

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Match words and meanings.

1. ____ innovation
2. ____ criteria
3. ____ reputed
4. ____ onset

a. guidelines or rules of performance

b. supposed to be a fact

c. something new or unusual

d. the start or beginning of something

Draw conclusions. *(More than one answer may be correct.)*

5. Making cars in less time cuts costs because
   a. workers are paid for fewer hours.
   b. machinery stays running a shorter time.
   c. quickly made cars were less dependable.

6. In 1927, what percent of the cars in the world were *not* Model T's?
   a. 32% b. 22% c. 38%

Make comparisons.

7. Name two similarities between the "Tin Lizzie" and the "Bug."
   - ______________________
     ____
   - ______________________
     ____

8. Name one difference between the two cars.

   ____

   ____

Recall details. *(Write **T** for true or **F** for false.)*

9. ____ In 1927, more than half the world's cars were Model T's.
10. ____ Model T's were made in the 1960s and 70s.
11. ____ Unfortunately, the Beetle broke down easily.
12. ____ Hitler wanted the masses to produce cars for the rich.
13. ____ The design of the Beetle changed every year.
14. ____ Ford's assembly line increased the cost of the Model T.
15. ____ Volkswagen is German for "the people's car."
16. ____ The Germans did not build any Volkswagens after WW II.

Look it up in a reference source.

17. What did Henry Ford say about the color of his Model T's?

    ____

    ____

    ____

READ: *The whole city shook—and then it burned.*

THE SAN FRANCISCO EARTHQUAKE

San Francisco Chronicle.

VOL. LXXXVIII. SAN FRANCISCO CHRONICLE, SUNDAY, APRIL 22, 1906. NO. 97

FORCE OF THE FIRE IS AT LAST SPENT

The city of San Francisco began to shake just before dawn on April 18, 1906. The ground rolled, then stopped. Then it lifted and rolled again. The quake lasted 65 seconds. In that time, buildings were ripped apart. Bridges were twisted as if they were made of clay. More than 500 people were killed. Thousands were suddenly without a home.

About 13 minutes after the quake, there were aftershocks. Finally, the earth stopped moving. Had the devastation ended? No. Now San Francisco began to burn.

The quake had torn apart gas lines. The shaking had toppled hundreds of gas lamps and stoves. Firefighters hitched up their horse-drawn wagons and hurried to put out at least 50 fires. But when they attached their hoses to the fire hydrants, not a drop of water came out. The quake had broken the water pipes! The northern California city burned for three days. San Francisco was a wasteland of rubble and ash.

Mayor Eugene Schmitz formed a Committee of Safety to take charge of the disaster. The Army stationed troops in the city. The soldiers were instructed to keep order and to shoot looters.

Even before the fires were out, help began to arrive. New Yorkers sent money, and the city of Los Angeles sent trainloads of goods. Children around the country were let out of school to collect money. In all, 14 countries, including China, France, Japan, and Canada, sent money.

Homeless San Franciscans camped out, mostly in parks. They kept warm under blankets and rugs. Then the army set up tent camps to house people. Cleaning up was a huge job. But workers began to load up rubble in wagons and haul it away. The rebuilding began. One month later, most of the city had running water. After two months, electricity had been restored.

By 1909, about 20,000 buildings had been replaced. The city of San Francisco had indeed risen from the ashes.

REFLECT: *Think about disasters.*

1. If all of your belongings were destroyed in a disaster, what would you miss the most? ______________________________

2. Name one of your possessions that can be replaced.

   ____

   Name one of your possessions that *can't* be replaced.

   ____

RESPOND: *Circle a letter or word, fill in the blanks, or write out the answer.*

Match words and meanings.

wasteland	rubble	disaster	topple

1. __________________: rough, broken pieces of stone, rock, and wood
2. __________________: land where nearly everthing has been destroyed
3. __________________: to knock over or cause to fall down
4. __________________: an event that causes much suffering or loss

Recall details.

5. Why did fires start all over the city?

____

____

6. Why weren't firefighters able to put out the fires immediately?

____

____

7. Who helped set up tent camps and keep order?

____

____

Draw conclusions. (More than one answer may be correct.)

8. What had to be done after the quake?
   a. The wreckage had to be cleared away.
   b. A new mayor had to be elected.
   c. Rebuilding had to begin.

9. What did the 1906 quake have in common with other kinds of disasters?
   a. Many people were killed.
   b. There was no electricity.
   c. There were aftershocks.

10. What modern inventions might have saved lives during the 1906 fires?
    a. extension ladder trucks
    b. flashlights
    c. flame-extinguishing chemicals

Identify examples.

11. Circle other kinds of natural disasters.

terrorist attack	broken arm	tornado
factory explosion	car accident	hurricane
train wreck	flood	drought

Recognize synonyms. (Complete words from the reading.)

12. Groups of *soldiers* are often called *t*_ _ _ _ _ _ .
13. One kind of *calamity* is a natural *d*_ _ _ _ _ _ _ _ .
14. A store's *g*_ _ _ _ are the *merchandise* it has to sell.
15. *Thieves* who steal things during a disaster are called *l*_ _ _ _ _ _ _ .

Look it up in a reference source.

16. What did writer Jack London say about San Franciscans during the disaster?

____

____

____

____

READ: *Did you know that your hair has a life of its own?*

ALL ABOUT HAIR

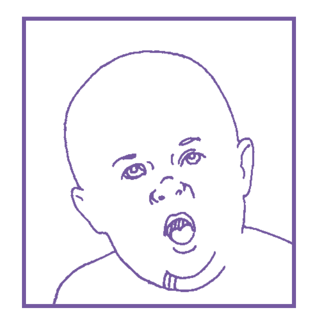
About 90 percent of the hair on your head is still growing. A scalp hair grows about half an inch a month for two to four years. Then it falls out and a new hair replaces it. Hair grows more in the morning than at other times.

Most people lose about 70 strands of hair a day. But stress can cause even more hair loss. If you are very sick, or not eating enough nourishing food, your hair loss can double.

It takes eyebrows only ten weeks to grow and fall out. (That's why they stay so short.) In comparison, eyelash hairs last about three months before they're replaced with new ones.

Some hair never does grow back. A few women go bald—but baldness affects many more men. Most men slowly become bald over a period of many years. One out of five men, though, begins balding in his 20s. Another one of five men will not go bald at all. This trait is largely determined by genetics.

Hair color comes from melanin. This is a pigment deposited in the hair cells as they form in the root. Melanin produces hair colors ranging from blond to black. As people grow older, pigment is no longer deposited in the newly forming hair cells. That's why hair gradually loses color. Without melanin, the hair becomes transparent. You can see inside the hair shaft, which is hollow and filled with tiny air bubbles. As light hits the air bubbles, the hair *appears* to be gray or white.






REFLECT: *Think about hair.*

1. Do you think men mind going bald? Explain your answer. ______________________

____

____

2. Describe a hairstyle you've worn in the past. How do you wear your hair today? How is it different? ______________________

____

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Match words and meanings.

1. ____ nourishing
2. ____ transparent
3. ____ pigment
4. ____ scalp

a. coloring matter
b. skin on top and back of the head
c. provides what is needed for life and growth
d. something you can see through

Identify parts of speech.

5. The *color* of his hair is black.
   "Color" is a (noun / verb).
6. I'm going to *color* my hair black.
   "Color" is a (noun / verb).

Recall details. (Complete words from the reading.)

7. P__ __ __ __ __ __ is deposited in newly forming hair cells.
8. E__ __ __ __ __ __ hairs last about ten weeks.
9. People lose more hair when they're s__ __ __ __ __ __ __ .
10. Eyebrow hairs have shorter lives than s__ __ __ __ hairs.

Fact or opinion? (Write **F** for fact or **O** for opinion.)

11. ____ Hair grows faster if you have it thinned regularly.
12. ____ Hair cells form in the root.
13. ____ Bald men are less attractive than men with thick hair.
14. ____ Baldness is more common in men than in women.
15. ____ Old men usually have thinner hair than young men.
16. ____ Hair color is an inherited genetic trait.
17. ____ Very shiny hair looks fake.

Draw conclusions.

18. (Three / Two / Four) of five men will become bald over the years.
19. Losing a (good job / few pounds) might speed hair loss.
20. A person grows a new set of eyelashes about (4 / 12 / 2) times a year.
21. In a month's time, you lose about (710 / 210 / 2,100) hairs from your head.
22. The average scalp hair grows about (2 / 4 / 6) inches a year.

Look it up in a reference source.

23. What is a hair *follicle*?

____

____

____

READ: *Like every person, every word has a history.*

WORD ORIGINS

Where did the word *Monday* come from? A form of the word was first used in ancient Rome. Its purpose was to dedicate the second day of the week to the moon. Early English people later translated the Roman word into Old English. The English word meant "moon's day." Over the years, "moon's day" became *Monday*.

Escape is another word that was first used by the ancient Romans. In Latin, the language of ancient Rome, *escape* means "out of cape." In those days, when a man was being chased, he would throw off his cape as he ran away.

What reward did ancient Romans get when they proved themselves in battle? They were given a gift of slaves. The slaves were called *addicts*. In time, the word took on a different meaning. Even today, a person who is a slave to anything is known as an *addict*.

While British explorer Captain Cook was visiting Australia, he saw strange, large animals hopping around. He asked a tribesman what they were called. The tribesman said, "Kangaroo." In his language, that meant, "I don't know."



The word "coconut" comes from Portuguese explorers. To them, the three holes in a coconut resembled a human face. They named it "coco," which, to them, meant "smiling face."

Traditional map makers once had a picture of Atlas in their books. Why? Atlas was the Greek god who carried the Earth on his shoulders. Over the years, a book of maps became known as an *atlas*.

REFLECT: *Think about how words change.*

1. Some old words are no longer in use. Ask an older person about a word he or she once used that isn't used today. Explain what that word means.

____
____
____
____

2. Think of one new word you and your friends use and explain what it means. (Choose a word that older people don't understand.)

____
____
____
____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Match words and meanings.

1. To *dedicate* something is to
   a. spend too much time on it.
   b. set it apart for a special purpose.
   c. write what people say about it.

2. The word *resemble* means to
   a. be like or similar to.
   b. put something together.
   c. completely take apart.

3. If you *prove yourself*, you
   a. solve a math problem.
   b. show you can do a job well.
   c. feel really bad about your job.

Identify parts of speech.

4. *Monday* comes from the word "moon's day."

   Monday is a (noun / verb).

5. Romans could *escape* by throwing off their capes.

   Escape is a (noun / verb).

6. The Roman threw off his cape as he made his *escape*.

   Escape is a (noun / verb).

Make comparisons.

7. Find *two* similarities between *addict* and *Monday*.
   a. Both words came from Latin.
   b. Both have similar meanings.
   c. Both meanings changed over time.

8. Find one similarity between *kangaroo* and *coconut*.
   a. Both words came from Australia.
   b. Both words came from explorers.
   c. Both words are verbs.

Recall details.

9. (Two / Three) words in the reading have roots in ancient Rome.

10. The word *coconut* came from the (Japanese / Portuguese) language.

11. Captain (Cook / Hook) visited Australia.

12. Atlas was a (British / Greek) god.

13. The word (*coco* / *kangaroo*) meant "I don't know."

14. Today, an atlas is a book of (facts / maps).

Look it up in a reference source.

15. From what foreign language did we get the English word *planet*?

    ____

    What was the word's original meaning?

    ____

READ: What to do when you're feeling blue.

DEALING WITH STRESS

What's wrong? You can't sleep—or perhaps you sleep all the time. You withdraw from family and friends. You feel that you're worthless, not good enough. What's going on? You may be under too much *stress*.

Everyone should watch out for symptoms of stress. Here are a few more telltale signs: You might lose interest in things you usually enjoy. Perhaps you can't concentrate. Maybe you have mood swings. (A mood swing is a sudden, big change in the way you feel. In the morning you feel great, for example. But by evening, your emotions have crashed, and you feel that life isn't worth living.)

There are many causes of stress. A few of them are a divorce or death in the family, a move to a new home, or peer pressure. Other causes might be the birth of a sibling, doing poorly in school, or doing something you know is wrong.

The best way to deal with stress is to get to the heart of the problem. Figure out what's really bothering you, and then take steps to solve the problem. For example, suppose you feel pressure from your friends. Maybe they want you to do something you don't want to do.



As hard as it may be, the best solution is to tell them "no." You may need to find friends who don't push you in the wrong direction.

You can't, of course, avoid *all* stress. But you can take a break from it. Playing video games, watching a movie, or listening to music can ease your tension. Physical activities such as dancing or sports can help, too. Sometimes, taking a break can clear your mind. If you think about your problems later, maybe you can come up with answers.

Talking to a trusted friend can help. Even if he or she doesn't have the answers, it helps to express what's bothering you. Avoid drugs and alcohol, though. They may seem to offer an easy escape from problems. But sooner or later, *they* become problems, too.

REFLECT: Think about stress.

1. What's one thing that makes you feel stressed? ______________________________

____

2. Is there anything you can do about it? Why or why not? ______________________

____

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Build your vocabulary.

1. Circle two words that are *antonyms* (words with opposite meanings).

symptoms	solution	worthless
withdraw	worthy	worried

2. Draw lines to connect the words that are *synonyms* (words with the same or similar meanings).

solution	sign
worthless	stress
symptom	answer
tension	useless

Draw conclusions.

3. Your friends urge you to do something dangerous. This is
   a. worth a try.
   b. peer pressure.
   c. reasonable advice.

4. Your mom's new baby keeps you awake all night. You might be
   a. stressed because of peer pressure.
   b. worried that the baby might get sick.
   c. stressed because of resentment.

5. Every little thing seems to make you angry. Maybe you're
   a. stressed about something.
   b. not eating well.
   c. just like everyone else.

*Identify examples. (Is it a symptom of stress? Write **Y** for yes or **N** for no.)*

6. ____ You're exhausted. You've spent all night writing a great song.

7. ____ For about three weeks, you've been unable to sleep until early morning.

8. ____ Your team wins an important tournament.

9. ____ You get a stomachache every time your mom and brother fight.

Recognize solutions.

10. Circle the activities below that might provide relief from stress.

    driving in rush-hour traffic
    asking someone to be nicer to you
    shooting hoops
    making someone look like a fool
    a long, hot bath
    cuddling with your dog or cat
    shoplifting
    watching a funny movie

Look it up in a reference source.

11. What is the "fight or flight" response?

    ____
    ____
    ____
    ____
    ____

READ: *Learn about a man with a superior mind.*

BENJAMIN BANNEKER



In 1731, Benjamin Banneker, an African-American, was born in Maryland. His father and grandfather were former slaves. Banneker was a farmer—but his interests went far beyond farming.

When Banneker was a young man, he borrowed a pocket watch from a wealthy neighbor. He took it apart, made a drawing of each part, and put it back together perfectly! Then he used his drawings to design a wooden clock. This clock kept time for more than 50 years.

At age 58, Banneker taught himself astronomy. Soon he was predicting eclipses of the sun and moon. In 1789, he caused a stir when he correctly predicted an eclipse of the sun. Better-known mathematicians and astronomers had predicted the eclipse incorrectly.

Banneker also became well-known for his popular almanacs. His almanacs contained all sorts of information, including medical treatments and weather predictions. He published his almanacs annually from 1791 to 1802.

Using borrowed books, Banneker taught himself advanced mathematics. He also learned surveying. In 1791, Banneker was chosen to help survey the District of Columbia. The surveying project would decide the boundaries of the district. Then the chairman of the project suddenly quit—and took the plans with him! Amazingly, Banneker reproduced the plans from memory.

Banneker sent one of his almanacs to Thomas Jefferson in 1791. With it he enclosed a letter that challenged Jefferson. He wanted to know how Jefferson could really be a "friend of liberty" when he owned slaves. Banneker urged Jefferson to reject the idea that one race is superior to another.

Jefferson wrote back to him. His letter praised Banneker's talents—but he kept his slaves.

Banneker died in 1806. His work, however, lived on after him. For years, his almanacs were used as evidence of the abilities of African-Americans. Banneker's talents were indeed living proof of the intellectual equality of black people.

REFLECT: *Think about how people learn.*

1. Banneker taught himself things he wanted to know.
   Write about something you taught yourself to do. ______________________

   ____

   ____

2. What did Benjamin Banneker have in common with Thomas Jefferson? ________

   ____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Recall details. *(Write **T** for true or **F** for false.)*

1. ____ Banneker was very smart, but he had a poor memory.
2. ____ Banneker helped decide the boundaries of the District of Columbia.
3. ____ People would use Banneker as an example of blacks' superiority.
4. ____ Banneker once took apart a neighbor's wooden clock.

Match words and meanings.

astronomy	boundary	predict
annually	reproduce	survey

5. To ________________ something is to declare it in advance.
6. ________________ is the science of the heavenly bodies.
7. To ________________ something is to create it again.
8. A ________________ is a line that marks the edge of an area.
9. The words ________________ and *yearly* are synonyms.
10. To ________________ a piece of land is to measure its size, shape, and boundaries.

Make inferences. *(Find the answer by reasoning.)*

11. The antonym of *superior* is
    a. stupid.
    b. intelligent.
    c. inferior.
12. If you "cause a stir," you
    a. get people's attention.
    b. stir up a lot of trouble.
    c. make people jealous of you.

Draw conclusions. *(More than one answer may be correct.)*

13. Imagine that Banneker had been a young man today. What profession might he have chosen?
    a. business person
    b. janitor
    c. scientist
    d. college professor
    e. veterinarian
    f. physician
    g. professional athlete

Look it up in a reference source.

14. What is located in the District of Columbia?

____

____

____

____

READ: ***Someday, doctors might be able to* listen *for cancer.***

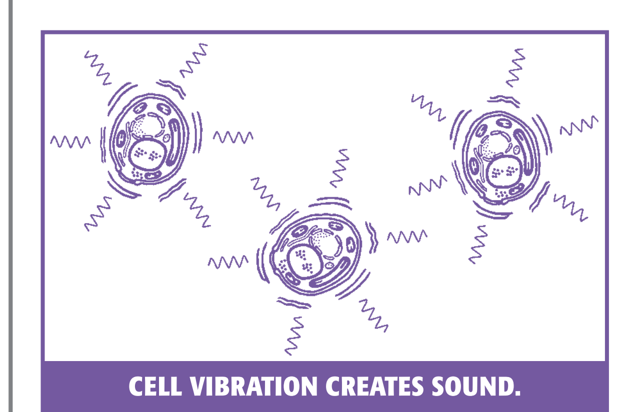
THE SOUNDS OF CELLS

Four years ago, nanotechnology expert James Gimzewski had an interesting idea. He already knew that cells are made of tiny moving parts. Now he wondered if those moving parts produced vibrations. He knew that all vibrations produce noise. So would it be possible to listen to sounds made by the vibrating cells?

Gimzewski created an extremely small device to measure those vibrations. Then he made yet another device. This one amplified sounds—made them loud enough for human ears to hear.

Gimzewski began his research using yeast cells. As he worked, he discovered that a yeast cell made about 1,000 vibrations a second. When he turned up the volume, a hum like music filled the room. “It wasn’t at all what I expected,” Gimzewski remembers. “It sounded beautiful.”

Gimzewski is still experimenting. He has determined that when a yeast cell is dead, it gives off a dead-sounding hiss. And when he dipped yeast cells in alcohol, they gave off a creepy sound—like a scream—and then died. This sound is so eerie that it piqued the interest of a director of horror movies. The director asked permission to use the “screaming” cells’ sounds in a movie.



CELL VIBRATION CREATES SOUND.

Even small changes in temperature made the cells sound different. But Gimzewski has his sights set on something bigger than movies. He’s determined to use his discovery to detect cancer.

Gimzewski has learned that something as minor as small changes in temperature will make cells sound different. He also knows that cancer creates changes in cells. Cell walls might change shape, or the cells will divide more rapidly. These changes could produce different vibrations. If the “sound” of cancer could be identified, doctors might be able to detect cancer simply by listening.

Gimzewski’s research continues. These days he’s trying to create a device that can listen to *human* cells. Needless to say, cancer experts are seriously interested in his work.

REFLECT: ***Think about diseases.***

1. Name one machine or procedure that’s already used to detect cancer. ______________________

2. Which disease would you most like to see a cure for? Why? ______________________

____

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Match words and meanings.

vibrations	device	yeast
determined	amplify	cancerous

1. _________________ is a substance used in baking. It makes bread rise.
2. _________________ are rapid, back-and-forth motions.
3. To be _________________ is to be unyielding—unwilling to give up.
4. A _________________ is a tool made for a particular purpose.
5. When you _________________ something, you make it louder or stronger.
6. _________________ cells grow more rapidly than normal cells.

Recall details.

7. Gimzewski found that yeast cells
   a. behave just as human cells do.
   b. vibrated very rapidly.
   c. were dipped in alcohol.
8. Gimzewski hopes doctors will someday be able to
   a. direct horror movies.
   b. listen to dying yeast cells.
   c. listen to cancerous cells.
9. Gimzewski hopes to make
   a. cell sounds loud enough to hear.
   b. a device that listens to human cells.
   c. music from humming cells.

Fact or opinion? *(Write **F** for fact or **O** for opinion.)*

10. ____ A movie director was interested in Gimzewski's work.
11. ____ Cells made different sounds at slightly different temperatures.
12. ____ The vibrations of normal yeast cells sounded beautiful.
13. ____ When cells become cancerous, they change.
14. ____ Nanotechnology will someday cure cancer.

Identify synonyms. *(Complete the words from the reading.)*

15. alterations / c__ __ __ __ __ __
16. microscopic / t__ __ __
17. fascinating / i__ __ __ __ __ __ __ __ __ __
18. motion picture / m__ __ __ __

Look it up in a reference source.

19. Write dictionary definitions.

cell: ______________________________

____

____

____

____

cancer: ______________________________

____

____

____

____

READ: *There really is a right and wrong way to argue.*

HOW TO ARGUE—WITHOUT LOSING A FRIEND

An argument is an exchange of views between people who do not agree. Some arguments turn into angry quarrels. Suppose, for example, that a friend borrowed your car and left it full of fast-food trash. What if you dealt with the situation this way:

YOU: Why did *you* leave all that trash in *my* car? It's an absolute mess, and I'm tired of you *always* being so inconsiderate.
FRIEND: Look who's talking. You're such a slob, I didn't think you'd notice.

How did a minor incident turn into such a nasty exchange? You were angry and feeling as though your kindness was being abused. So instead of talking with your friend, you yelled at him. "Why did *you*" was a challenge. That's why your friend immediately went on the defensive and yelled back.

Now the argument is over. You don't feel satisfied that you've told him off. In fact, you don't feel good at all! During the heat of the moment, he said some things that hurt your feelings. And perhaps you didn't really mean some of the things you said.

How can you avoid such situations? Learn to argue in a better way. Be clear about what's bothering you, but don't



get carried away by your anger. Try something like this:

YOU: I don't like it when you leave trash in my car. It makes me feel like you don't respect me.
FRIEND: You're right. It was very inconsiderate. I won't do it again.

Before speaking, you obviously took a deep breath and got control of your anger. You were clear and honest. The words you used let your friend know specifically what was bothering you. And most importantly, you didn't put him down. You treated him with respect—so he responded in the same way.

Also notice that this time you began the argument using the pronoun "I." An argument beginning with "*You* did . . ." is generally a challenge. What usually follows is criticism or an insult. And it goes downhill fast from there.

Using "I" in arguments won't eliminate all disagreements. But it can certainly cut down on the yelling.

REFLECT: *Think about arguments.*

1. What is one thing that can really make you angry? ______________________________

2. Has someone ever hurt your pride during an argument? Explain your answer.

____

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Identify synonyms. *(Complete the words from the reading.)*

1. truthful / h_ _ _ _ _
2. garbage / t_ _ _ _
3. disagreement / a_ _ _ _ _ _ _
4. scream / y_ _ _

Interpret figurative language.

5. You may say hurtful things in the *heat of the moment*.
   a. when the argument gets emotional
   b. if it's hot outside
6. This conversation is *going downhill fast*.
   a. swiftly moving underground
   b. quickly going out of control
7. Using the "I" method can *cut down* on yelling.
   a. shatter; destroy
   b. reduce the amount of
8. These words don't *put him down*.
   a. hit him   b. insult him

Make comparisons. *(More than one answer may be correct.)*

9. Name one difference between "I" arguments and "you" arguments.

   ____
   ____
   ____
   ____

10. Which sentences might be used in an "I" argument?
    a. This really bothers me.
    b. You're such a loser.
    c. What's the matter with you?
    d. How many times have I told you not to do that?
    e. I'm not sure what you mean.
    f. It makes me feel bad when you do that.
    g. You're making me feel bad.
11. Which behaviors are likely to be used in a "you" argument?
    a. threats   c. name-calling
    b. praise   d. sarcasm

Identify the main idea.

12. The reading is about
    a. winning arguments with other people.
    b. using the "I" method to communicate better.
    c. making sure that people do what you want.

Look it up in a reference source.

13. Write dictionary definitions.

    criticism: ______________________
    ____
    ____

    insult: ______________________
    ____
    ____

READ: *Some common phrases from the 1700s are still in use today.*

TITLE: ______________________________

There were no cameras in the 1700s. How could you capture a loved one's image? You'd have to hire a sculptor or a painter. How expensive would that be? The price would depend on how many arms and legs were to be painted! Still today, when you hear someone say, "That will *cost you an arm and a leg*," you know the price will be high.

Men of the 1700s shaved their heads (because of lice) and wore wigs. (Women covered their hair.) Wealthy men could afford good-looking wigs made of wool. But wool wigs couldn't be washed. To clean them, a maid would carve out a loaf of bread. Then she would put the wig in the shell, and bake it for 30 minutes. The heat would make the wig big and fluffy again. That's why, even today, a powerful, wealthy man is sometimes called a "*bigwig*."

Many houses in the 1700s consisted of a large room with only one chair. Commonly, a long wide board was folded down from the wall and used for a table. The "head of the household" always sat in the chair while everyone else ate sitting on the floor. Frequently, an honored male guest would be invited to sit on the chair during a meal. The man sitting in the chair was called the "chair man." In business today, the most important man is often the "*chairman of the board*."

In the 1700s, personal hygiene was very different than it is now. People took baths only twice a year—in May and October! Many people developed acne scars by adulthood. To smooth out their complexions, women would spread bee's wax over their faces. If a woman was rude enough to stare at another woman's face, she was scolded. "*Mind your own bee's wax*," she was admonished. And if a woman sat too close to the fire, the wax would start to melt. That very embarrassing event was called "*losing face*."

REFLECT: *Think about life in America during the 1700s.*

1. Write an interesting title on the line over the reading.

2. The 1700s were an important time in American history. Name three people who were alive then. (Hint: Remember that America declared its independence from England in 1776.)

- ______________________________
- ______________________________
- ______________________________

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Draw conclusions. *(Check more than one answer.)*

1. ____ In the 1700s, ordinary people probably couldn't afford to have their portraits painted.
2. ____ Modern men don't shave their heads unless they have lice.
3. ____ A wig tended to flatten out as it got dirty.
4. ____ Women in the 1700s were considered socially inferior to men.

Build your vocabulary. *(Unscramble words from the reading.)*

5. NEEHIGY ________________ is the science of keeping people healthy and protected from disease.
6. Your NOMEXIPLOC ________________ is the color and appearance of your skin, especially the skin of the face.
7. A SHOELOUDH ________________ includes all the persons who live in one house, especially family members.
8. An SERPEXISON ________________ is a word or phrase that communicates an idea.
9. To NOHISMAD ________________ someone is to verbally discipline that person for a misdeed.

Give examples.

10. Name a well-known person who could be described as a "bigwig."

    ____

11. Name two things that "cost an arm and a leg."
    - ______________________________
    - ______________________________

12. Describe something that would make a person "lose face."

    ____

    ____

Write antonyms from the reading.

13. female / ______________________
14. wealthy / ______________________
15. expensive / ______________________
16. praise / ______________________

Write synonyms from the reading.

17. unlike / ______________________
18. bad-mannered / ______________________
19. often / ______________________
20. preserve / ______________________

Look it up in a reference source.

21. What landmark trial for freedom of the press was held in 1735? What newspaper was involved?

    ____

    ____

    ____

    ____

READ: ***What did people eat before there were stores and kitchens?***

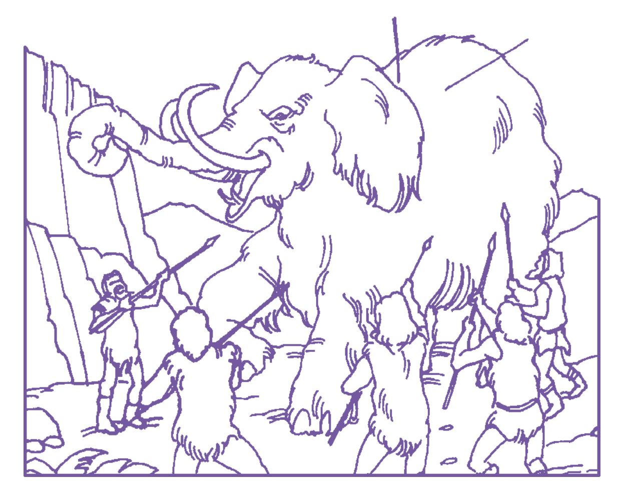
THE FIRST FOOD

Until about 10,000 years ago, there were no farms, let alone grocery stores. So early people spent much of their time searching for food. Women looked for roots, mushrooms, and eggs. They also collected nuts, snails, and grubs. (A grub is an insect in an early stage of life. It looks like a short, fat worm.) The women used sticks as digging tools.

Men hunted for animals. They hunted bison, horses, boar, mammoths, and deer. Their weapons were spears made of wood and stone.

These early men used several methods to capture and kill animals. Sometimes they disguised themselves with skins. If their prey was deer, a man might wear a deer head and skin. Then he would creep up on a herd of deer until they were close enough to attack.

Sometimes men dug deep holes and covered them with sticks. Animals that fell into the holes were trapped. Another method was to chase animals into swamps or over cliffs. To do this, hunters waved around burning branches to frighten the animals.



At first, people ate everything raw. Probably, the first experiment in cooked food came about when someone accidentally dropped food in a fire. After that, people decided that some things tasted better when they were cooked.

Later, early people learned to cook food in several ways. They cooked it on sticks that were held over the fire. Or they put it on flat stones that had been heated by fire. The first cooking pots were holes in the ground. A hole was dug, lined with animal skins, and then filled with water. Finally, rocks heated in the fire were added. When the water was hot enough, the food was put in the "pot" to cook.

REFLECT: ***Think about food and eating.***

1. How do people "search" for food today? ______________________

   ____

2. The first people searched for food every day. Today, about how much time did you spend looking for something to eat?

   ____

   ____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Match synonyms.

1. ____ accidentally   a. scare
2. ____ raw   b. gathered
3. ____ collected   c. mistakenly
4. ____ frighten   d. uncooked

Recall details. *(Complete the sentences with words from the reading.)*

5. The first cooking pots were ______________________________.

6. Early hunters used weapons made of wood and _________________.

7. To sneak up on animals, hunters wore ___________________.

8. Animals were ___________________ by burning branches.

9. Both women and men used ___________________ for their tools.

Draw conclusions. *(More than one answer is correct.)*

10. Why did early people have to search for food every day?
    a. Food would go bad if not eaten quickly.
    b. They didn't grow their own food.
    c. They didn't raise and keep animals to eat.
    d. They enjoyed searching, even in the snow.

11. Over the years, what *three* things have people done to make food readily available?
    a. planted crops
    b. raised livestock
    c. stopped eating meat
    d. established grocery stores

Write antonyms. *(Complete words from the reading.)*

12. predator / *p*__ __ __
13. stomp / *c*__ __ __ __
14. retreat / *a*__ __ __ __ __ __
15. cooked / *r*__ __

Make inferences.

16. A *boar* is a kind of (bear / pig).

17. A *mammoth* is a kind of (elephant / hippopotamus).

Look it up in a reference source.

18. *Homo sapiens*—the name of modern human beings—means "wise man." What do the names of these earlier human species mean?

homo-habilis: ______________________
____

homo-erectus: ______________________
____

READ: ***Pictures can be used to prove a point.***

NECESSITY IS THE MOTHER OF INVENTION

THE NECESSITY: How to prove an opinion and win a bet: At some moment in a horse's gait, are all four hooves off the ground at the same time?

THE INVENTION: A new method of clearly photographing objects in motion.

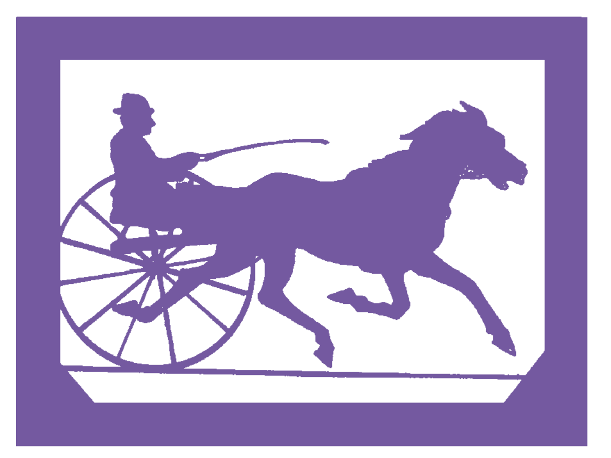
Leland Stanford, former governor of California, was a passionate horseman. His passion included a great interest in the way horses moved. He had a stable of more than 800 racehorses. That gave him many opportunities to observe horses in motion.

During Stanford's travels, he would often strike up conversations about horses. One such encounter was with some prominent East Coast horsemen. These men insisted that a trotting horse always has at least one foot touching the ground.

Stanford strongly disagreed. It was his firm belief that trotters—at some point in their stride—had all four feet off the ground.

Stanford immediately took up the challenge. He was determined to prove his opinion. According to legend, he even wagered $25,000 on his success.

In 1872, Stanford hired a local landscape photographer. Eadweard Muybridge's commission was to capture a clear image of a trotting horse in motion. That would settle the hotly debated issue once and for all!



For six years, Muybridge worked with scientists and engineers to design and assemble the required equipment. They even had to develop a new chemical formula to photograph fast movement clearly.

Finally, on June 15, 1878, the experiment was set in motion. Some 12 cameras were set up alongside a racetrack in Palo Alto, California. Wires were laid on the track at 21-inch intervals. Then a trotting horse, harnessed to a sulky, began to move. As the wheels of the sulky crossed the wires, the camera shutters were triggered.

The resulting 12 pictures—taken in about half a second—proved that horses do indeed "fly." It also set off the revolution in motion photography that would later become "the movies."

REFLECT: ***Think about inventions.***

1. Name one other invention that has had an impact on our lives. ______________________________

2. Describe a device that you would like to invent. ______________________________

____

RESPOND: *Circle a letter or word, fill in the blanks, or write out the answer.*

Match words and meanings.

prominent	landscape	assemble
legend	observe	revolution

1. To ________________ something is to watch it closely.
2. A major change in a stage of progress or development is a ________________.
3. To ________________ items is to bring them together as a whole.
4. A ________________ photograph is a picture of natural scenery.
5. A ________________ person is respected and well-known.
6. A ________________ is a popular but unverified story that has been passed down over the years.

Recall details.

7. Leland Stanford was very interested in
   a. what horses ate.
   b. the way horses moved.
   c. how fast horses ran.
8. Eadweard Muybridge was a
   a. portrait photographer.
   b. landscape photographer.
   c. animal photographer.
9. Muybridge worked with
   a. scientists and engineers.
   b. veterinarians and technicians.
   c. architects and engineers.
10. The East Coast horsemen insisted that when a horse trotted,
    a. only one foot would be off the ground.
    b. two feet would always be on the ground.
    c. at least one foot would always be touching the ground.

***Recognizing synonyms.** (Complete the words from the reading.)*

11. A *c*__ __ __ __ __ __ __ __ __ is the *assignment* of a specific task.
12. To *s*__ __ __ __ __ is to *walk,* taking long steps.
13. A *g*__ __ __ is a particular way of walking or running.

Draw a conclusion.

14. A *sulky* is
    a. an angry jockey.
    b. a horse-drawn vehicle.
    c. a saddle blanket.

Look it up in a reference source.

15. What was the name of the horse in the photograph that settled the debate?

____

READ: *Who created Charlie Brown?*

PEANUTS: A MUCH-LOVED COMIC STRIP

The name Charles M. Schulz may not be familiar to you. But most everyone knows the characters he created—especially Charlie Brown and Snoopy. Schulz's first *Peanuts* comic strip appeared in seven newspapers in 1950. No one, including the cartoonist, could have guessed how popular it would become. At its peak, *Peanuts* ran in more than 2,600 newspapers. Readership was estimated at 355 million in 75 countries. It was translated into 40 languages.

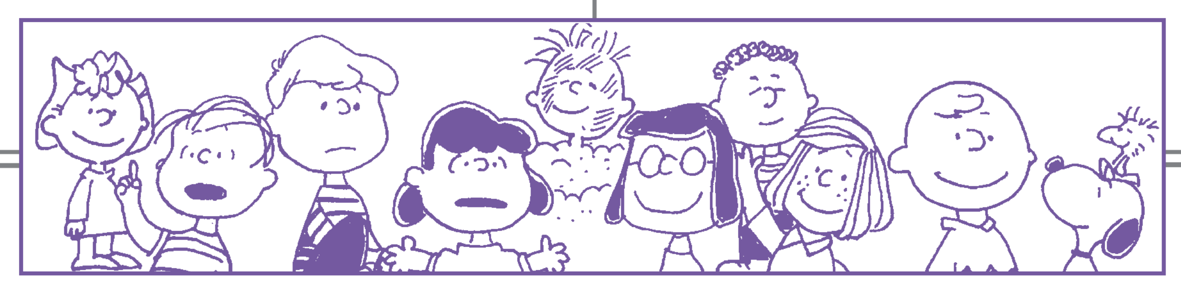
Schulz continued to draw the strip for 50 years. Unlike many other cartoonists, he used no assistants, even in the lettering and coloring process.

In the 1950s and early 1960s, *Peanuts* was remarkable for its social commentary. Schulz didn't address issues such as racial and gender equality directly. For example, Peppermint Patty's athletic skill and self-confidence were presented as self-evident. And Franklin's presence in a racially integrated neighborhood school was also taken for granted.

Schulz tackled topics ranging from the Vietnam War to school dress codes to the "new math." In 1963 he protested the way numbers were taking over people's identities. He added a little boy named "5" to the cast. His sisters were named "3" and "4." Their father had changed the family surname to their zip code.

The *Peanuts* characters have appeared in animated form on many television shows. In all, more than 30 animated specials were produced. The characters even found their way to the live stage. *You're a Good Man, Charlie Brown*, an extremely successful musical, ran off-Broadway for four years.

Charles Schulz lived and worked in Santa Rosa, California, for more than 30 years. After he died there in 2000, Sonoma County renamed the local airport after him. A bronze statue of Charlie Brown and Snoopy stands in Depot Park in downtown Santa Rosa.



REFLECT: *Think about this beloved comic strip.*

1. Who is your favorite *Peanuts* character? Explain what you like about him or her.

____

2. Circle four words that describe Charlie Brown.

athletic determined bossy unlucky bald adolescent stubborn sly

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Match synonyms.

noteworthy	converted
subjects	helpers

1. topics / ______________________
2. translated / ______________________
3. assistants / ______________________
4. remarkable / ______________________

Match antonyms.

familiar	local
animated	address

5. foreign / ______________________
6. motionless / ______________________
7. ignore / ______________________
8. strange / ______________________

Build your vocabulary. *(Complete the words from the reading.)*

9. You *p*__ __ __ __ __ __ __ something when you object to it.
10. *G*__ __ __ __ __ equality has to do with fair treatment for women and girls.
11. When you *e*__ __ __ __ __ __ __ __ , you come up with an approximate number.
12. Characters in the same show are members of the *c*__ __ __ .

Draw conclusions.

13. Charles Schulz supported (human equality / the Vietnam War).
14. Charles Schulz's neighbors in Santa Rosa were (shocked by / appreciative of) his work.
15. The *Peanuts* creator's (surname / given name) is Schulz.

Recognize examples.

16. Check two examples of "social commentary."
    - a. ____ I like vanilla ice cream.
    - b. ____ All Americans deserve good health care.
    - c. ____ Whales are mammals.
    - d. ____ Marie Antoinette was beheaded.
    - e. ____ Capital punishment is barbaric.

Look it up in a reference source.

17. What kind of dog is Snoopy?

    ____

18. What *Peanuts* character is always surrounded by a cloud of dust??

    ____

READ: *These shoes are comfortable from morning to night.*

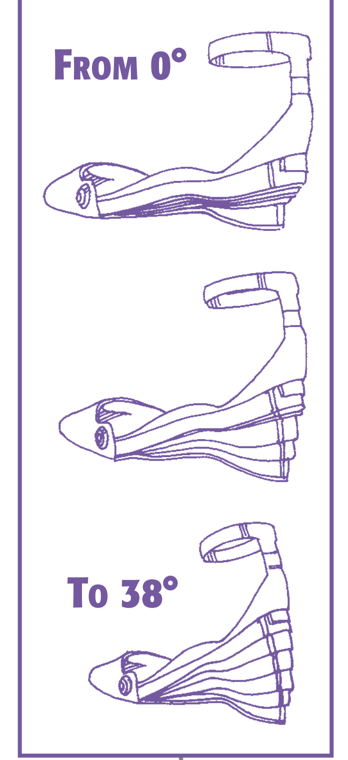
ESCALATING HEELS

Women's high-heeled shoes are uncomfortable and hard to walk in. Besides hurting your feet, they can make your back ache. After all, people weren't meant to walk around on their toes. So why do women wear them? Most people think they look great.

"High heels" have been popular for hundreds of years. In the 1700s, fashionable women in France wore *very* high heels. They had to be helped up and down stairs so they wouldn't fall.

Many of today's women wear high heels. But they seldom wear them all day. Why? Because they're too uncomfortable.

Now, however, industrial designer Wei-Chieh Tu may have come up with the perfect solution. "My wife wanted to wear three-inch heels," Tu says. "But she refused to buy them because she wouldn't be able to wear them all day. 'You're an industrial designer,' she said. 'You should be able to do something about that.' So of course I listened to her."



Tu designed an escalating high heel. The height can be set at six different levels, from zero to 38 degrees. All you have to do to adjust them is push a button.

Are you going to be on your feet all day at work? Set the heel at zero. Want to look sharp for a lunch date? Set the shoes at the middle setting. Dressing up for a club? Crank the heels up to the limit.

If fashions change—as they always do—there's no need to replace your shoes. Just set the height up or down.

Tu's idea originated in his childhood in Taiwan. He remembered the Chinese fans his mother and grandmother used. These fans could be spread out to use or folded up to put away. They changed shape with ease—like the shoes he designed.

REFLECT: *Think about fashion. (Fashion is the style that is popular now.)*

1. Name a clothing style you think is silly, and explain your thinking. The style can be something that is popular now or was in the past.

____

____

2. Name a past or present fashion you think is attractive. Tell why you think so.

____

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Identify antonyms. *(Complete the words from the reading.)*

1. descending / e__ __ __ __ __ __ __ __ __
2. problem / s__ __ __ __ __ __ __
3. often / s__ __ __ __ __
4. accepted / r__ __ __ __ __ __
5. disliked / p__ __ __ __ __ __
6. forgot / r__ __ __ __ __ __ __ __ __

Make an inference.

7. "Crank it up to the limit" means
   a. change the setting from highest to lowest.
   b. wear them until they really hurt your feet.
   c. set them as high as they can go.

Recognize the author's tone. *(More than one answer is correct.)*

8. The tone of this reading is
   a. formal.
   b. informal.
   c. casual.

Draw conclusions.

9. Industrial designers might design
   a. coffee mugs.
   b. computer monitors.
   c. handmade jewelry.

10. What do Tu's shoes do that fans can do?
    a. lie flat
    b. move like a ship
    c. change shape

11. In which situation would you probably prefer low heels?
    a. a shopping trip
    b. dancing at a party
    c. attending a wedding

Look it up in a reference source.

12. Following are just a few industrial designs that are viewed as classics. On the lines, write the year each item was first introduced. (You might also enjoy studying pictures of these classic creations.)

    __________ : iMac by Jonathan Ive and Apple's Industrial Design Group

    __________ : Porsche 911

    __________ : glass Coca-Cola bottle by Root Glass Company of Terre Haute, Indiana

    __________ : Barcelona chair by Ludwig Mies van der Rohe

    __________ : Cadillac Eldorado by Harley Earl

    __________ : Bic biro ballpoint pen

    __________ : Porsche 356 by Erwin Komenda

    __________ : IBM Selectric typewriter

    __________ : iPod by Apple Computer

READ: *These athletes are special in every way.*

THE SPECIAL OLYMPICS



"Let me win. But if I cannot win, let me be brave in the attempt."

–THE OATH OF THE SPECIAL OLYMPICS

The Special Olympics is an international program that trains people who are intellectually disabled to compete in sports. Throughout the year the athletes train in both summer and winter sports such as basketball, swimming, and skiing.

The Special Olympics were started by Eunice Kennedy Shriver (the sister of U.S. President John F. Kennedy). In 1968, Shriver set up a "Special Olympics" for athletes from the United States and Canada. The games were such a success that more countries organized their own Special Olympics programs. The first International Special Olympic Games were held in 1977. In 2005, some 2,000 athletes from 84 countries gathered to compete in the Special Olympics World Winter Games in Japan.

For participants, the games build valuable pride and self-confidence. The games also educate the public about the intellectually disabled. The focus is on what they *can* do, not what they *can't*. Disability experts say that intellectually disabled people suffer the worst discrimination in the world. Many people see them as a burden to society.

Athlete Loretta Claiborne says, "People have a misconception of the mentally challenged. They think you have to walk or talk a certain way to be mentally disabled. But it's not true." Claiborne adds, "Everyone has some kind of mental handicap. Things are not always what they seem." About her disability, Claiborne says, "I have just learned to work around it—that's what our people do all the time."

Special Olympics athletes are coached by volunteers. Coaches say their athletes have inspired them. Coach Rafer Johnson says that sometimes athletes who are running will take the hand of their closest rival. "They'll run hand in hand to the finish line," he says. "Or they'll stop in mid-race and go back to pick up a fallen runner. You won't see that anywhere else."

REFLECT: *Think about competition in sports—and in other areas of life.*

1. In your own mind, how important is winning?

   a. Winning is everything.

   b. It's great to win sometimes, but it's not everything.

   c. Doing one's best is more important than winning.

   Explain your choice. ______________________________

   ____

2. Can there be anything *good* about losing? Explain your answer.

____

____

RESPOND: ***Circle a letter or word, fill in the blanks, or write out the answer.***

Draw conclusions. *(More than one answer may be correct.)*

1. Imagine that you have trouble remembering things. How could you "work around" your forgetfulness?
   a. carry a notepad with written reminders
   b. keep certain objects, like keys, in one spot all the time
   c. don't forget to lock your house at night

2. What are some common mental challenges for many people?
   a. difficulty remembering people's names
   b. getting mad at careless drivers
   c. mixing up numbers when you write them down

3. To "be brave in the attempt" means
   a. to attempt to play many sports.
   b. to try one's very best.
   c. to help other people win.

4. Some special athletes will stop to help a fallen rival. What's your opinion of this? Write at least three sentences.

____

____

____

____

____

____

Build your vocabulary.

burden	misconception	attempt
rival	intellectually disabled	

5. A ________________ is a misunderstanding of some kind.

6. People who are ________________ ________________ focus on what they *can* do.

7. Your ________________ is someone who tries to beat you in a race or contest.

8. To ________________ something means to try to do it.

9. A ________________ is something that is hard to bear.

Recall details. *(Write* ***T*** *for true or* ***F*** *for false.)*

10. ____ Special athletes will do anything to win.

11. ____ President John F. Kennedy started the Special Olympics.

12. ____ Intellectually disabled people often suffer from discrimination.

13. ____ Special athletes learn only summer sports, such as track.

Look it up in a reference source.

14. Where are the 2007 Special Olympics World Summer Games being held?

    ____

READ: ***A gifted man who can't talk has a lot to say.***

STEPHEN HAWKING

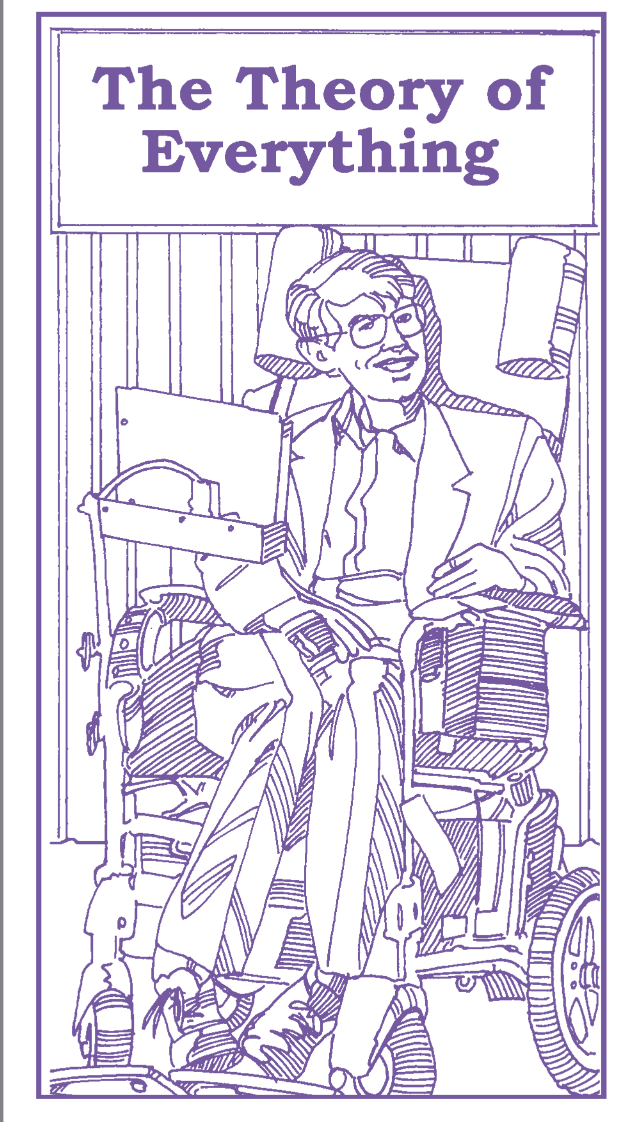
Stephen Hawking is the most famous physicist in the world. Many say he's the next Einstein. Why? Thanks to him, we understand the secrets of the universe much better. Most of his work has been done while he was in a wheelchair. And an amazing amount of his work has even been done since he's been unable to write or talk.

Stephen William Hawking was born in 1942 in England. As a boy in school, he was an average student. But since the age of 12, he wanted to be a scientist.

In his university years, Hawking studied physics. In 1962, his last year of college, he learned he had a terrible disease called *amyotrophic lateral sclerosis* (ALS). The disease gradually destroys the body's nerves and muscles. Doctors told Hawking that he probably had only two more years to live.

Hawking was shocked—and angry. He remembers thinking, "Why should it happen to me? Why should my future be cut off like this? Then, while I was in the hospital, I saw a boy die of leukemia in the bed opposite me. It was not a pretty sight. Clearly, there were people worse off than I." Whenever Hawking starts to feel sorry for himself, he says he thinks about that boy in the hospital.

Before Hawking learned he had ALS, he remembers being "very bored" much of the time. Having the disease transformed him. It made him realize that life was precious. He realized that there was much he could do.



Shortly after becoming ill, he became engaged to Jane Wilde, a fellow student. When the two-year prediction of death passed, Hawking was still alive. He and Jane were married in 1965, and had three children. The marriage lasted for 26 years. Hawking is now married to one of his nurses, Elaine Mason.

ALS, which often kills quickly, has let Hawking live many years. He is now more

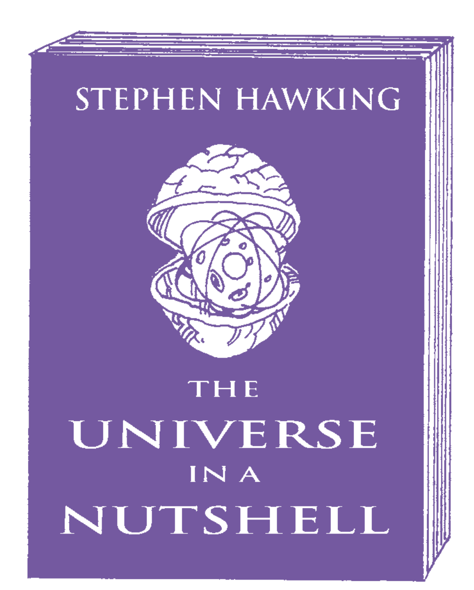
than 60 years old. And he has given the world so much!

The books he's written explain very difficult subjects to non-scientists. His first book, *A Brief History of Time*, was incredibly successful. It has been translated into 40 different languages. Another of his books, *The Universe in a Nutshell,* was also a bestseller.

Hawking has worked in many areas of physics. He is best known for his ideas about black holes—the mysterious remains of giant stars. As these enormous stars use up their nuclear energy, they collapse and form black holes. Hawking is also working on ideas that would explain the beginning of the universe and how it is organized.

Meanwhile, ALS has steadily attacked his body without mercy. When he could no longer walk, he had to use a motorized wheelchair. In time, he could no longer write, or speak. Now he's almost completely paralyzed. He operates his computer with a "blink recognizer" implanted in his glasses. By blinking and scrunching up his cheeks, he is able to communicate. At the front of his wheelchair is a computer screen. On the screen are lists of words and phrases. He points the computer cursor to the word or phrase he wants. The computer "voice" then says the words out loud. The computer can also transform certain words into mathematical equations. As you can imagine, it's a lot of work for Hawking to make a single sentence.

But Hawking keeps communicating his brilliant ideas. He travels around the world. He teaches and gives "talks." As long as he's able, he will share the power of his awesome mind.



REFLECT: ***Think about what it would be like to be disabled (lacking the ability to do something).***

1. Imagine being unable to see. What impact would that have on your ability to make friends? Write a few sentences describing your ideas.

____

____

2. Imagine not being able to hear or speak clearly. How would you communicate with a store clerk? Write a few sentences describing your plan.

____

____

3. Name one invention (besides the wheelchair) that helps disabled people. ______________________________

4. Do you think life was harder for disabled people 100 years ago? Why or why not?

____

____

RESPOND: *Circle a letter or word, fill in the blanks, or write out the answer.*

Build your vocabulary.

1. *Physics* is the science that deals with matter and energy. This field of science includes the study of motion, light, heat, sound, electricity, and force. A person who works in physics is a (physicist / physician).

2. *Gravity* is the force that pulls things toward the center of the earth. Gravity is at work when something (falls to / covers up) the floor.

3. *Remains* are things left over after death or destruction. When a giant star (collapses / generates), its remains can form a black hole.

4. To *transform* something is to (change / display) it. Hawking's computer transforms words on the screen into speech.

5. An *equation* is a math statement in which two things are declared to be equal. "4 + 2 = 6" (is not / is) an equation. "4 > 2" (is not / is) an equation.

6. Circle the words that best describe Stephen Hawking.

determined	chemist	brilliant
discouraged	lazy	admired

Identify the main idea.

7. The main idea of the reading is
   a. Hawking is best known for his ideas about black holes.
   b. In spite of having ALS, Hawking has contributed much to science.
   c. Hawking uses a computer to communicate his thoughts.

Recall details.

8. ALS attacks the body's
   a. hair and skin.
   b. muscles and nerves.

9. Hawking can move
   a. several toes.
   b. his eyelids and cheeks.

10. Doctors once told Hawking that he had
    a. to get more rest.
    b. two years to live.

11. Hawking uses his computer to
    a. make his own voice louder.
    b. "speak" for him.

12. Hawking was married (before / after) he learned he had ALS.

13. Hawking is interested in how the (universe / world) works.

14. Hawking has made discoveries about (gravity / Einstein).

15. Hawking wrote books (before / after) he learned he had ALS.

Draw conclusions. *(More than one answer may be correct.)*

16. What has Hawking been able to do in spite of his disability?
    a. travel
    b. drive a car
    c. write books
    d. lecture
    e. get dressed
    f. raise a family

17. Because of his disability, Hawking needs help
    a. taking a shower.
    b. remembering people's names.
    c. eating a meal.
    d. getting on an airplane.
    e. listening to music.

18. What suggests that doctors don't know everything there is to know about ALS?

    ____

    ____

    ____

19. Why do you think Hawking was only an average student in school?

    ____

    ____

    ____

20. How did the boy who died of leukemia help Hawking?

    ____

    ____

    ____

Make inferences. *(Find the answer by reasoning.)*

21. "*When the two-year prediction of death passed*" means
    a. time seemed to pass very slowly.
    b. Hawking was still alive after two years.
    c. the doctor passed away two years later.

22. "*The disease attacked Hawking's body without mercy*" means
    a. ALS made Hawking's disabilities more and more severe.
    b. ALS kept Hawking from being able to climb stairs.
    c. Hawking had no mercy in attacking his disease.

Look it up in a reference source.

23. Why is ALS more commonly called Lou Gehrig's disease?

    ____

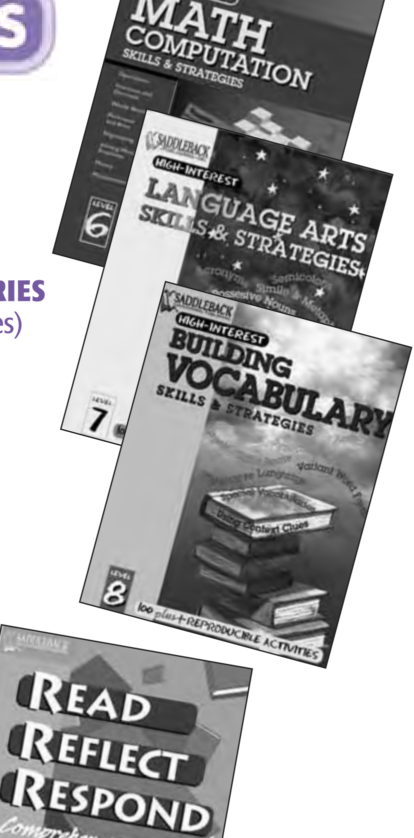
    ____

    ____

    ____



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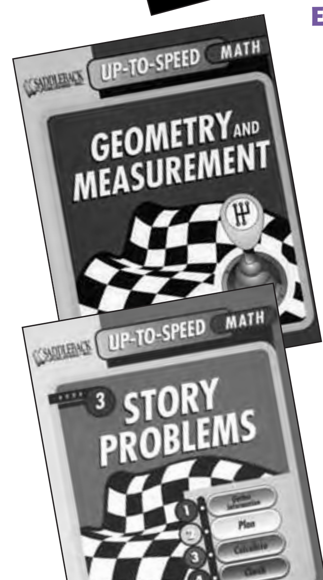


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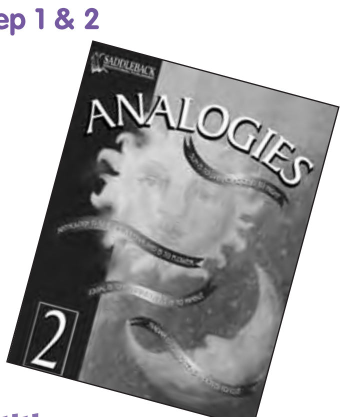
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